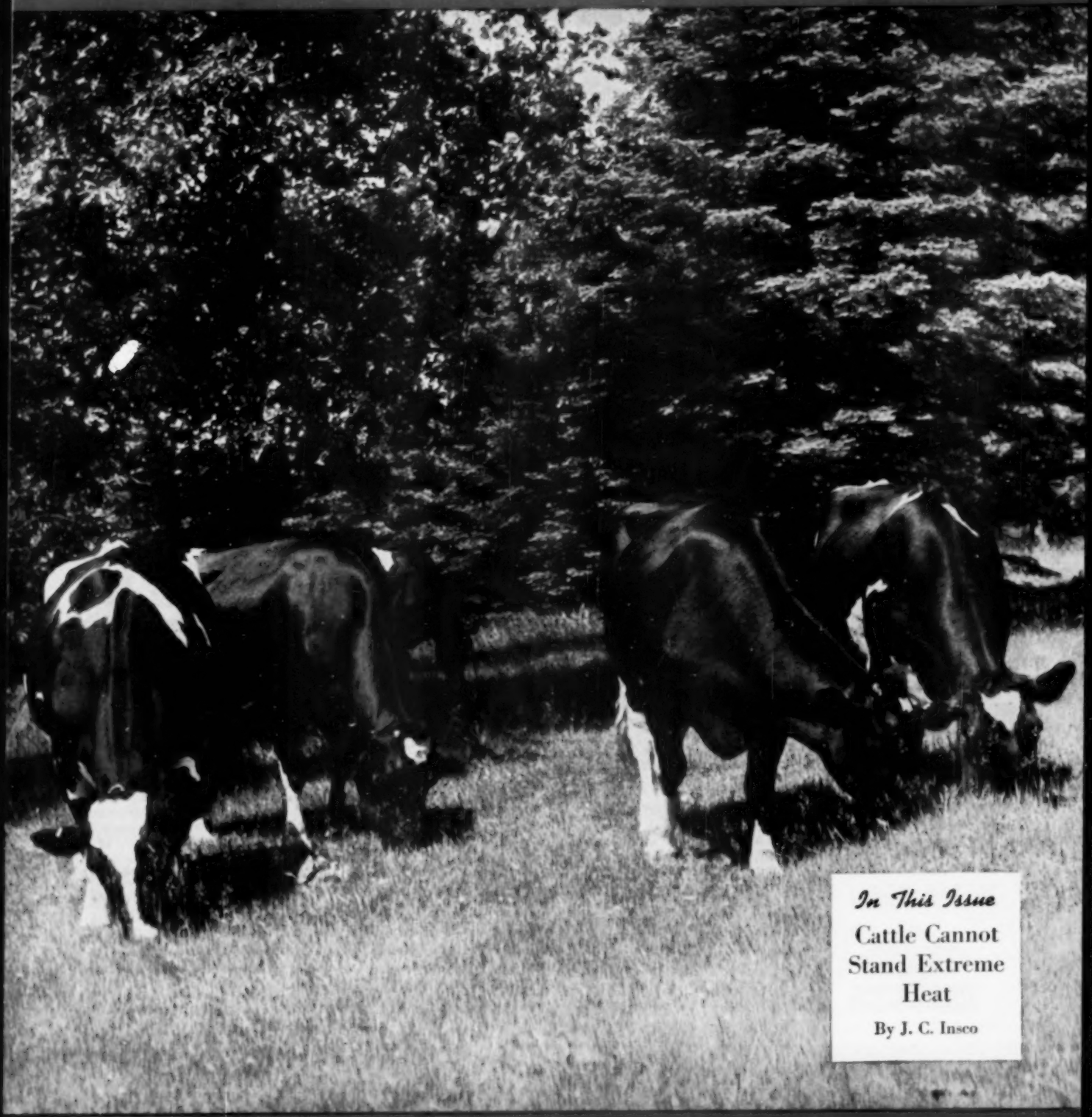
HOARD'S DAIRYMAN

THE NATIONAL DAIRY FARM MAGAZINE



In This Issue

Cattle Cannot Stand Extreme Heat

By J. C. Insco

Our 65th year of service to American agriculture

Volume 95, No. 14 Fort Atkinson, Wisconsin July 25, 1950

FORD INTRODUCES DARING NEW TRACTOR ADVANCEMENT

ONLY FORD TRACTOR HAS THE PROOF-METER

Ford TRACTOR

FOR THE FIRST TIME—

ACTUAL PROOF OF YOUR TRACTOR PERFORMANCE RIGHT BEFORE YOUR EYES

No other tractor manufacturer has ever given you anything like this Ford Tractor Proof-Meter. None has ever dared to make it so easy for you to measure and appraise tractor performance, both *before* you buy and *after* you buy.

Here, truly, is the *new* way—the *better* way—to buy a tractor. It's the *one* way in which you can realize the fullest obtainable profit from your tractor investment.

Nothing Like It Ever Before On Any Tractor—The Proof-Meter tells you the things you need to know in order to operate your tractor most efficiently and economically—to keep it always in the pink of condition—and to get the best results on any job.

Always before you've had to guess at these things. But not any more—not with the Ford Tractor!

PROOF of the Performance You Paid For—Before your eyes you have proof always that your Ford Tractor is giving you the performance for which you paid.

The Proof-Meter will help you get best performance out of plows, harrows and other implements. It will help you operate P.T.O. and belt-driven machines at their most efficient speeds. It gives you a chance to keep records that can help you reduce operating costs and increase your farm profits.

Get a PROOF Demonstration—Right now, your Ford Tractor dealer is ready to give you a tractor demonstration unlike anything you ever saw before. It will pay you to make a date for a PROOF demonstration right away.

Five Instruments in One

Indicates (1) engine speed, (2) P.T.O. speed, (3) belt pulley speed, (4) Tractor speed in miles per hour in first, second, third and fourth gears. (5) Number of hours worked by tractor.

PROOF of Engine Performance

Peak pulling performance and fuel economy on most field work are reached at engine speeds of around 1750 r.p.m. Proof-Meter lets you know you're at this speed.

PROOF of Right Tractor Speed

In operations like mowing, raking, spraying, planting, etc., it is important to hit and hold the right tractor speed. With the Proof-Meter, you can *know* that tractor speed is right.

PROOF of Correct P.T.O. Speed

You must know P.T.O. speed is right when driven machine is in operation to be sure that corn pickers and other P.T.O.-operated machines are doing best work. Proof-Meter tells you.

PROOF of Belt Pulley Speed

Belt-driven machines work best and last longest when operated at the specified belt pulley speed. With the Proof-Meter, you can operate at correct speed. No separate counter needed.

PROOF of Hours Worked

No guess work as to when to lubricate, service or adjust vital parts. Proof-Meter indicates number of hours worked. *Proof* that the Ford Tractor "works more hours—saves more hours."

Dearborn FARM EQUIPMENT

IF YOU HAVEN'T DRIVEN A NEW FORD TRACTOR LATELY YOU'VE A SURPRISE COMING!

Since the announcement of the present model 8N Ford Tractor, a great tractor and a great value have been made greater still—with the new Proof-Meter—with 12% more drawbar horsepower and pounds pull—20% greater belt horsepower—many other new features. 36 important improvements in all. Why not get behind the wheel of a new Ford Tractor—soon?

DEARBORN MOTORS CORPORATION • DETROIT 3, MICHIGAN

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Ford Farming MEANS LESS WORK . . . MORE INCOME PER ACRE

Opinions, Brickbats, Bouquets

Every Farmer a Salesman

HOARD'S DAIRYMAN:—Regarding your editorial, in the June 10, 1950, publication, entitled "It's Sleeve Rolling Time," in which you speak of dairy people joining hands, etc., to promote the sale of dairy products. I agree with Owen Richards when he says, "It is a sales job; not a political football." However, I disagree with your editorial. I don't think we have to spend a huge amount of money to advertise. Or, at least, not like the 3 to 6 million dollars, as the oleo manufacturers; or the 4½ to 25 millions, as the others you mention have spent.

If we could turn 40 million salesmen loose throughout the country, we could reach every family and fill Mr. Richards' quota of the ADA in no time. I see no reason why every dairy farmer and every manufacturer concerned couldn't be made a salesman. Instead of putting salesmanship before the public by way of advertising, let the ADA campaign educate every man who milks a cow, or handles a bottle of milk, or a pound of cheese, or a pint of ice cream to be 100 per cent loyal to dairying. Start where the products start, right at the cow and make salesmen of everyone from there clear up to the top. Let them look down on substitute users the same as a union man looks down on a scab or ununionized worker.

If every dairyman who buys a new shirt this week would say to the sales clerk, "Does your family drink milk and use butter, or cheese, or ice cream? If not I'll trade elsewhere because I depend on those things in order to keep a shirt on my back," people would become interested. This alone would sweep the country and advertise beyond any amount of cash you could pour out of the meager ADA sock. In this way you turn the whole thing into a big game and everybody plays it. Besides, if we all buckle in and start the game and it fails to produce results, just ask anyone you patronize to show you a sales slip showing he has purchased some dairy products recently.

The whole thing must be based on loyalty and understanding of how it will help, directly or indirectly, the one who promotes another sale. If each can be made to support and understand the game, we can increase sales to the quota set up by the ADA and have every family in America dairy conscious within a very short time.

Oregon. C. R. GERRY.

(Mr. Gerry's intentions are excellent. However, the problem is not one of influencing more families to use dairy products. Rare is the family that does not use dairy products today. The important problem ahead of us is to influence all of our families to use MORE dairy products the year around. Furthermore, it must be a voluntary purchase, not a compulsory purchase. Our job is to create the desire for more dairy products and this can best be done through accepted, proven merchandising methods being used by the American Dairy Association.—ED.)

General Mills Larro THRIFTY FEEDING FACTS

PASTURES CAN FOOL YOU...BAD!

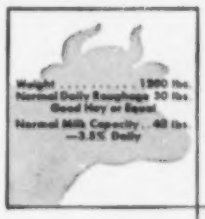
Even The Best Fall Far Short of Supplying Enough Nutrients For Maximum Production

Good pasture cannot be emphasized too much. It's the dairyman's most economical feed . . . his very life blood. But, on the other hand, it shouldn't be considered the whole answer to his feeding problems.

Pasture should be thought of as high class (but watery) roughage. At no time can it replace all of the concentrates in the rations of high producing cows. Larro scientists have even found that pasture doesn't replace all the hay . . . which is, after all, cured pasture. They have discovered, after 38 years of continuous experimenting and testing, that pasture should be supplemented with hay and a top notch dairy feed. They developed Larro Dairy Feed to be the most nearly perfect pasture and roughage supplement.

Larro Dairy Feed, fed according to production, supplements pasture and hay to help furnish the full balance of nutrients needed to get the maximum pounds of milk throughout the pasture season. Pasture and hay maintain the cow and produce the "break-even" amounts of milk. Larro Dairy Feed provides the concentrated milk producing nutrients that help keep your cows producing up to their inherited capacity.

Take "Bonnie Belle" as a typical example:



ON PASTURE, She Needs 30 lbs. Roughage Daily Just for MAINTENANCE and 15 lbs. of Milk

...BUT BELLE GIVES 25 LBS. MORE MILK DAILY WITH LARRO

Here's all "Belle" can get from any type pasture

Here's the added good hay she needs

But By Adding ONLY 9½ lbs. Larro DAILY "BELLE" GIVES 40 LBS. OF MILK (According to the Lactometer 1400 FULL CAPACITY)

25 EXTRA pounds of milk with Larro

Dairy Feed from any type of pasture

Calves Can Go To Pasture At Five Months

Your calves shouldn't go to pasture until they're five months old. Pasture cannot be depended upon for much of the calf's food during these first months of its life. After calves go on grass, no milk or special calf feeds are needed to get good growth. Feed 5 lbs. of Larro Dairy Feed for each calf—the same grain mixture given to your milk-producing herd. Feed at this rate too, until maturity. As with the cows, provide the stock free-choice with plenty of good quality alfalfa or mixed legume hay in addition to pasture. Also provide plenty of clean, fresh water.

HAY-SAVING MANGER SHIELD

Every dairyman knows how cows nose and toss hay or silage out of the manger onto the floor beyond where they cannot reach it. This problem is easily solved with a curved, plywood shield bolted to a swinging, curved pipe frame, two or three stalls wide. You can swing and hold the shields up out of the way with hooks suspended from the ceiling and inserted into screw-eyes in the frame. Then, while the cows are eating, the shields can be lowered into place.

HIGH HEAT BRINGS LESS MILK

Summer heat of 80 to 85 degrees F. seems to be the top limit of what your milk cows can stand and keep up production. The smaller breeds are least affected by the higher temperatures. Larger breeds begin to react to heat with lower production at about 80 degrees. You will want to see that your cows have some cool, shady spots during these hot summer days.

General Mills D-2-50

Farm-tested FOR GREATEST PROFIT OVER FEED COST...

Larro FEEDS

Address General Mills, Larro Feeds, Dept. 9, Minneapolis 1, Detroit 2, San Francisco 6, Kansas City 6

NOW! HEAVIER CALVES ON LESS MILK

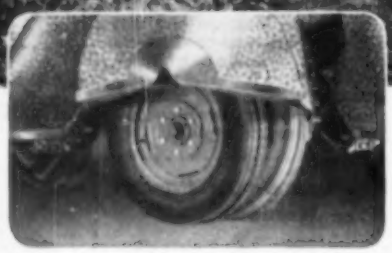
IT'S Easy With The SIMPLIFIED LARRO PLAN

ONLY 4 STEPS

1. Feed Milk—twice a day for 5 weeks.
2. Feed Larro Calf Builder—free choice from birth until 100 lbs. has been fed.
3. Feed hay—as soon as calf will eat it.
4. Provide water—at all times.

PAY FOR THE FEED WITH THE MILK YOU SAVE

Save that "Down" Corn with an OLIVER Picker!



The new Oliver No. 4 mounted Picker is balanced over the rear tractor wheels. There's no forward overweight to bog down the front wheels in soft fields. Turning radius is extremely short . . . steering is exceptionally light.

It's the extra ears you save that count! Whether high and dry on a tall, heavy stand . . . or on stalks that have "hit the dirt" with the onslaughts of borers and wind, you can depend on an Oliver picker to snare the hard-to-get ears.

"Live" snapping roll extension points and gathering chains work close to the ground. Wide "floating" shields follow the contour of the row, nose under "down" and tangled stalks.

Call on your Oliver dealer before fall. Get the full facts before you buy any picker. Check the many Oliver picker advancements, too. For example, the new, modern Oliver No. 4 tractor-mounted Picker-Husker is equipped with combination rubber and steel rolls that husk *clean* under widely varying conditions. It's big in capacity . . . easy to handle . . . quick to service.

There's an Oliver picker to meet your exact corn harvesting needs. Shown here is the No. 5 single row trailer-type Picker-Husker. Other pull types include the single row No. 5 Picker-Snapper and the two-row No. 2 Picker-Husker.

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400 West Madison Street, Chicago 6, Illinois

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Name .....

Post Office .....

Rural Route ..... County ..... State .....

I farm ..... acres.

Pays to Feed Grain With Pasture

Frequently dairymen write in asking whether or not it is necessary to feed grain to dairy cattle that have access to good pasture during the summer months. Even though dairymen report that satisfactory results are obtained when no grain is fed, experiments conducted at the Virginia Agricultural Experiment Station, as well as at several others, indicate the feeding of limited amounts of grain to cows producing 20 to 30 pounds or more of milk per day on good pasture is profitable.

One year ago a group of Holstein cows was divided equally based on the age, number of days since calving, and daily milk yield. Both groups were put on natural bluegrass pasture that had been used in fertilizing experiments for a number of years and was termed "excellent" by those conducting the experiment. Half the cows were fed a mixture of 300 lbs. ground corn, 200 lbs. ground oats, and 100 lbs. wheat bran. The cows were fed according to Morrison's standards for cows on "excellent" pasture, being adjusted according to changes in milk flow throughout a three-month period. Pasture was the only feed for the cows in the "no grain" group.

The bluegrass pasture was divided into plots and the two groups of cows were rotated between these plots on June 7 and on July 1. These rotations were made as a precaution in case one area produced more grazing than the other. However, both areas appeared to furnish ample grazing and on further rotations were made.

Both groups of cows were put on ladino clover for two weeks in July and September. All cows were milked and handled the same.

During the three-month experiment, the four cows fed grain in addition to pasture produced 4,403 lbs. more milk than those fed pasture only. Those in the grain group were fed 2,673 lbs. grain mixture, and valued at $60 per ton, cost $80.19. Even if milk were bringing only $3 per cwt., the increased production would be worth $132.09. In other words, the feeding of grain returned much more by way of additional milk production than it cost.

The four cows in the grain group produced an extra income per cow of $33.02. Deducting the grain cost per cow of $20.05 left an average additional return per cow in the grain group of $12.97.

The experiment also showed that the cows increased their milk yield when transferred from bluegrass to ladino clover pasture. However, they maintained their body weights better on bluegrass than on ladino.

Experiments at other stations have shown that dairy cows can produce only about 15 to 30 pounds of milk per cow per day on pasture alone. In Michigan, cows in dairy herd improvement associations fed grain all year gave an average of 357 lbs. fat per cow per year; those fed grain except for one to three months in the summer, 317 lbs., and those fed grain eight months or less, only 277 lbs.

Experiments at the Louisiana Station and at the Montana Field Station of the U. S. Department of Agriculture showed that cows on pasture alone did not obtain sufficient nutrients to maintain normal production of milk.

In conclusion, we can say that the chances are good that the additional milk obtained when limited amounts of grain are fed to cows on pasture will not only pay for grain fed but also will increase profits.

HOARD'S DAIRYMAN

The National Dairy Farm Magazine

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COVER PICTURE

The four cows featured on the cover of this issue are Wisconsin Holsteins. The picture is particularly appropriate at this time in that it sets the theme for our feature article, "Cattle Cannot Stand Extreme Heat," by J. C. Insco, on page 525. The importance of good pasture and plenty of shade cannot be minimized on dairy farms in all but the most northern sections of the country.

We have just scratched the surface in our knowledge of cattle response to heat, cold, humidity, and other environmental factors. Dr. Samuel Brody's work at the University of Missouri has been most significant in the past and promises to make more valuable contributions in the future.

The cover picture was taken by Vande Press Photos.

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Hoard's Dairyman is published on the 10th and 25th of each month. Advertising copy for the 10th of the month issue must be received before the 15th of the preceding month. For the 25th of the month issue, copy must be received by the 1st of that month.

4-WAY PROTECTION

1. Localize fire—prevent spreading to other buildings
2. Will not ignite from flying sparks, falling embers
3. N-A-X Steel ribs help reduce danger of collapse
4. Help contain fires in single section of building—give time to remove livestock, machinery, crops and other storage

Every year in every section of America, farm fires take a terrible toll in lives and property . . . more than $100,000,000 worth of equipment, livestock, machinery and crops in storage—plus hundreds of human lives . . . often destroy long years of labor in a few short hours.

Why not plan *now* to protect your farm property the way so many other farmers are doing—with all-steel, fire-safe Quonsets that assure 4-way *plus* protection . . . that not only *resist* flames, but once a fire has started, help *localize* them.

Remember, fire knows no favorites. So, for real peace of mind . . . for the fire protection your farm deserves, ask about Quonsets at your nearest Quonset dealer's—*before it's too late!*

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So Big! So Good! So Beautiful!

America's
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Optional on all models at extra cost

Power-Packed Silver Streak Engines—
Choice of Six or Eight

World Renowned Road Record
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When you're buying a new automobile, price is very important, of course. But even more important is *what you get for your money!*

Look at what you get when you buy a wonderful new Pontiac. You get a *big*, roomy, comfortable car—a car of distinguished *beauty*—a car offering such sparkling performance that it's *always* a pleasure just to sit behind the wheel and go! And you get, too, Pontiac's heritage of *thorough goodness*—your assurance that mile after mile, year after year, you will enjoy economical, dependable, really pleasant driving.

All these things—plus the pride and prestige of Pontiac ownership—are yours at a price *just above the very lowest!* You owe it to yourself to inspect these new cars carefully, to learn why—*dollar for dollar, you can't beat a Pontiac!*

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PONTIAC MOTOR DIVISION OF GENERAL MOTORS CORPORATION

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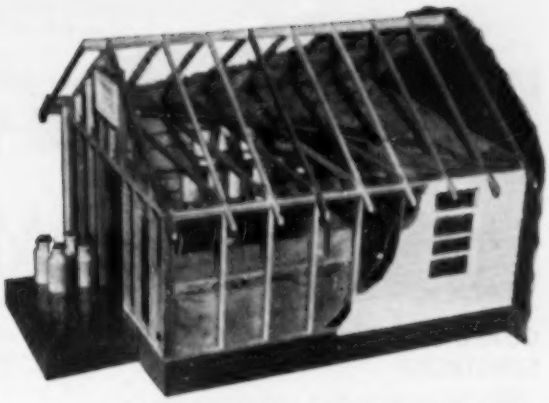
Founded in 1885

Make yours a Model Milk House



This small-scale model of the milk house, diagrammed below, shows simple construction details. Note particularly the wise use of insulating material in ceiling and walls.

By D. W. Bates

NOT many farmers would have use for the model milk house pictured above. However, a model full size milk house will help save time and labor and contribute to high, premium quality milk. It costs no more to build one which is well designed and carefully planned than it does to build a less desirable one.

The first consideration in milk house construction is its location. In some cases, due to the topography of the land, there seems to be only one possible location. However, in most cases there is a choice of building sites. The correct location of the milk house will save miles of walking in the course of a year.

Build the milk house at the side of the barn rather than at the end because if the milk house is at the end of the barn, further expansion of the stable in that direction is blocked. If there are not more than 16 cows in a line, the milk house should be located near the end of the barn. A well arranged dairy stable has a cross alley at each end and one of these cross alleys can lead directly into the milk house. If expansion of the dairy operation is made and the barn lengthened, the milk house can still be in the most advantageous location by extending the end of the barn which is near the milk house. For barns having more than 16 cows in a line, it is best to place the milk house near the center of the barn opposite the cross alley. This will require the least number of steps in carrying the milk.

No Better Than Foundation

A milk house like other permanent buildings can be no better than its foundation, which should extend below the frost line. For a frame building it should be 6 inches thick with a 12-inch footing. If the milk house is to be constructed of 8-inch masonry blocks and 4-inch furring strips, a 12-inch thick foundation wall is necessary in which case the footing can be eliminated. In either case it is a good practice to lay a four-inch agricultural tile carried to a suitable outlet outside the base of the foundation to insure good drainage.

In New York State the milk house can now be built directly against the barn. A vestibule and double doors are no longer required. With this type of construction a satisfactory ventilation system in the dairy stable is necessary. The merits of the vestibule have long been questioned and its elimination has met with great favor among New York dairymen. There are several advantages to this arrangement. It is easier to get into the milk house and the wall between the barn and the milk house will be about the same temperature as the inside of the dairy stable if it is built of a material which is a good conductor of heat.

For a frame barn wall, matched siding on the outside of the studs covered with cement asbestos board for an inside wall finish in the milk house is satisfactory. For a masonry block barn, uninsulated concrete blocks may be used. Plumbing can be affixed to the warm wall and thus the danger of freezing is reduced and the amount of pipe required to bring water into the milk house from the barn is lessened. The milk house may also be built wholly within the barn structure provided all the walls are tight. Ventilation of the milk house in either case can be accomplished by use of the windows and the stable ventilation system.

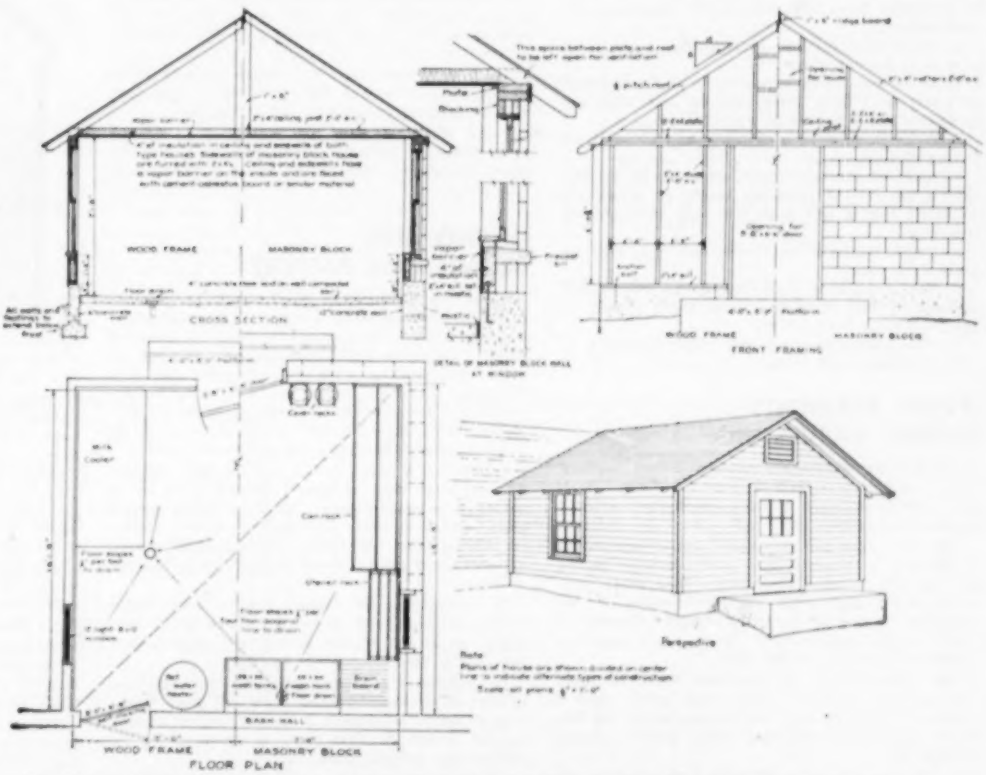
Convenient arrangement of the milk house will save countless steps in the course of a year. The sink and drain board should be located against the wall in common with the barn. Such an arrangement has two advantages. It eliminates the need for carrying milking utensils across the milk house as would be the case if the sink were located on the far wall. In addition it cuts down on the number of feet of pipe necessary if water is piped into the milk house from the barn.

Set Cooler In Pit?

Locate the milk cooler and can racks on opposite side walls with the door opening to the loading block between them as shown on the plan. This provides for the least number of steps in carrying out the full cans from the cooler and returning the empties to the racks. It is preferable not to set the cooler in a pit as the pit is difficult to keep clean and, because of the moisture usually present in it, excessive corrosion of the cooler will result. The size of the pit is also difficult to increase if a larger cooler is to be installed.

A milk can hoist can be used to aid in lifting the cans out of a top opening cooler. If a side opening spray type cooler is used, the cans can be rolled in and out of the side and lifting is not necessary.

Slope the concrete floor of the milk house toward the drain on a grade of ¼" per linear foot. Two drains, one under the sink and the other near the milk cooler, will eliminate excessive differences in floor *(Turn to page 528)*



Any dairyman handy with tools should be able to construct this milk house after carefully studying the construction details in the line illustrations. Of particular basic importance is the foundation upon which the milk house is built. Be sure to get down to sound, solid footing so the milk house will be permanent and not be shifting, cracking, twisting in years to come.

Editor's Note: Consult your local dairy inspector before building your milk house so it will serve present markets and available future markets.

GUARD AGAINST SUNSTROKE

With the coming of high temperatures and the rush of the harvesting season, it is easy to be overcome by heat illness. When it strikes it can be serious, sometimes fatal.

While both heat exhaustion and sunstroke may seem to result from exposure to high external

If your skin is hot and dry, it may be sunstroke.

heat, they are two entirely different things. With heat exhaustion, the patient's skin is cold or clammy while with sunstroke, the skin is hot and dry. A simple rule may serve as a guide and avoid confusion regarding the treatment. Briefly, it is this—if the patient is cold, make him warm; if he is hot, make him cool.

You can protect yourself against heat sickness by following these National Safety Council recommendations:

1. Avoid overexertion, particularly in the early part of the heat wave.
2. Avoid too much exposure to direct sunrays or extreme indoor temperatures and high humidity; wear a hat while out of doors.
3. Wear light, porous clothing and avoid tight-fitting clothes.
4. Increase the use of salt on food, or use salt tablets or salt in drinking water to offset the excessive loss of salt from the body through perspiration.
5. Drink water often throughout the day, one glass at a time.
6. Eat nutritious food but avoid overeating; vitamin C lost through perspiration should be replaced with fruit juices.
7. Get plenty of sleep and bathe regularly.
8. Avoid ice cold water.

AVOID ACCIDENTS DURING HARVESTING

Farm safety specialists remind us that "harvest time is accident hazard time on the farm." It is a season when haste is often emphasized without necessary caution.

The first step for safe operation of harvesting machinery is to put it into good condition before the harvest begins. This means that seats, controls, steps, and other similar features of the machine should be in good repair. Shields or other safety guards must be in place before a machine is taken to the field.

The operator of the machine must be alert and observe certain safety rules—never take a chance! Here are rules recommended by the National Safety Council that every farmer should remember:

1. Always stop all machinery before oiling, adjusting, or unclogging.
2. Avoid wearing floppy or ragged clothing.
3. Always operate tractors at a safe speed. Start smoothly and slow down for turns and rough ground.
4. Avoid operations too close to the edge of ditches or embankments.
5. Small children are definitely out of place around harvesting machinery.
6. Avoid jumping off equipment before it has come to a full stop.
7. Remember to look both ways as you approach a highway and cross with care.
8. On a highway, obey the signs and rules of the road and don't forget to use headlights and taillights at night.

FENCING ON THE CONTOUR

With an increase in the amount of farming on the contour, a cooperative study is being made of contour fencing at the Soil Conservation Experiment Station in Ohio.

To date the following conclusions may be drawn from the experiment:

1. Constructing a fence on the contour is not difficult and, in fact, may be easier than stretching a straight fence which passes over dips and rises, necessitating the adjustment length of top and bottom wires.
2. Less tension is needed and should be used than with a straight fence.
3. Posts should be placed so that the angle of the flection is approximately even at each post, thus distributing the pull toward the center of curvature equally.
4. Good judgment should be used in spacing posts. Apparently 16½ feet is satisfactory for long radii but closer spacing may be necessary for sharper curves.
5. Posts should lean out enough so that when the wire is stretched the position of the post will be vertical or slightly out at the top.
6. All stretches of fence constructed in 1947 have stood in good condition for one year with slight slacking in tension and shift of position of line posts.

LADINO AND BROMEGRASS PASTURE

Based on a four-year experiment at Wisconsin, a mixture of ladino clover and bromegrass is just about tops for pasture when it is managed right. Compared with pure ladino, mixtures of ladino and timothy, with orchard grass, and with Kentucky bluegrass, it was found that the ladino-brome and ladino-orchard grass mixtures far surpassed the others in total yield, yielding about 3 1/3 tons of dry forage equivalent per acre.

Ladino, used alone and in the mixture, did not do nearly as well in closely grazed plots as in moderately grazed ones. In the closely grazed plots timothy and bromegrass were largely eliminated after two years. Orchard grass stayed in the closely grazed areas much better than the others.

In contrast to the closely grazed plots, where Kentucky bluegrass came in, there was little bluegrass in any of the moderately grazed plots the fourth year.

In general, the stand of ladino was excellent in the moderately grazed plots all four years. Where ladino was sown alone or with bluegrass, annual weeds became quite a problem in the moderately grazed plots.

These findings emphasize the importance of avoiding close grazing if ladino is to be most productive.

TOP-DRESSING ALFALFA PAYS

Wisconsin soil specialists say that top-dressing alfalfa will pay off. You'll be able to keep the stand longer and you'll get more feed and better feed while you have it.

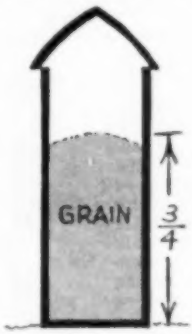
Be sure to use a fertilizer rich in potash, unless a soil test shows you don't need it. Alfalfa is noted as a heavy user of potash. Depending on how rich the soil is, it is recommended to use from 200 to 500 pounds of fertilizer such as 0-9-27 to which some fertilizer borax or borate has been added.

The last figure in the formula shows the amount of potash the fertilizer contains. A soil test may also show you don't need borax, but if you don't have the soil tested it costs only 50 cents to a dollar to be sure the crop has enough boron.

Top-dressing does not need to be limited to old stands as it will also pay for itself on this year's seedings. Alfalfa stands may be fertilized any time until the ground freezes this fall.

SILO FOR GRAIN STORAGE

An unused silo may solve your problem of storing several thousand bushels of shelled corn or small grain. U. S. D. A. agricultural engineers say that both masonry and wooden-stave silos will work satisfactorily if certain safety and storage precautions are observed. A platform floor to keep grain out of the silo pit and above



Unless reinforced, a silo should not be more than ¾ full of grain.

ground level, and a tight roof are essential. It is also necessary for the wall to be tight, and this can be accomplished by using roll roofing or applying a coat of hot asphalt.

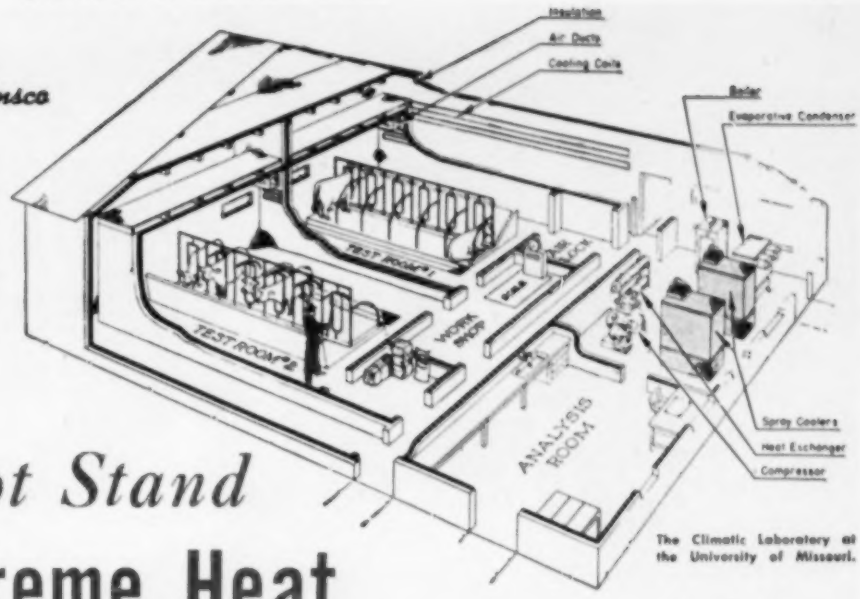
Silos built for corn silage should never be filled more than ¾ full with grain. Those built for grass silage may be filled ⅞ full; or, with added reinforcement, they may be filled completely. Two No. 9 wires placed at 4 and 6 feet from the top that fit snugly against the silo wall and drawn up tightly, are best. If a grass silage silo is 12 feet in diameter and 36 feet high, this type of reinforcement for complete filling is needed for the top 8 feet. Such silos 14 by 40 feet need reinforcement in the top 12 feet.

A 12-foot silo filled three-fourths full will hold 2,440 bushels of shelled corn. Full it will hold 3,250 bushels. A 14-foot silo will hold 3,570 bushels of shelled corn when three-fourths full, 4,925 when filled.

The worst hazard of using a silo for grain storage is in drawing off the grain from the bottom. This causes a shift in the pressure distribution on the silo wall which, if done too rapidly, can cause collapse. It is advised that the grain be drawn off slowly or else taken from top.

By J. C. Insco

Holsteins, in Missouri studies, declined in milk production at 80-degree temperatures; Jerseys began to go down at 85 degrees.



The Climatic Laboratory at the University of Missouri.

Cattle Cannot Stand Extreme Heat

WHAT type shelters best meet the needs of my dairy cattle? Should my big concern be protection against cold or protection against heat? How do changed climatic conditions affect the production, health, and life expectancy of dairy cattle? How wise is it to import dairy cattle from regions of different climatic conditions?

These are some of the questions in the minds of dairy people that research now underway at the University of Missouri Agricultural Experiment Station in cooperation with the United States Department of Agriculture is aiming to answer.

Samuel Brody, A. C. Ragsdale, H. J. Thompson, and D. M. Worstell of the University of Missouri have presented the background for this research. Tentative answers to some of these questions are found in the first two of a series of ten research bulletins dealing with environmental physiology with special reference to the influence of temperature and related factors on production and physiological reactions in dairy cattle.

Climate Varies Between Countries

The major agricultural reason behind the research is the fact that the varying American climate is entirely different from the conditions in Europe where the major dairy breeds originated. This brings about the problem of adjusting the "old country" animals to the "new country" by breeding and housing methods. Modern transportation also has a part in the "transplanting" of animals from their native habitat to regions of entirely different climatic conditions. Breeders don't give a second thought to loading a valuable animal into an airplane and shipping it thousands of miles over mountains and oceans into entirely different climates.

In addition, the dairyman wants to know, before he spends his money on shelters, the most desirable and most economical shelter for both hot and cold weather.

Still another motivation behind this project is the feeling that the nutritional level of the three-fourths of the world's population—over one and a half billion persons—that live in tropic and subtropic regions, where the present dairy breeds do not prosper, needs to be improved. This could be most effectively accomplished by increasing the milk supply and lowering its production costs in those regions.

A study recently completed at the Climatic Laboratory, (see drawing) dealt with the effect of temperature from 50° to 105° F. on the feed consumption and milk production of dairy cattle.

The temperature of the control room was held between 50 and 60° F. for about five months. The temperature of the experimental room was increased systematically from 50° to 105° F. over the experimental period. Near the end of the test period the temperature of the experimental room was lowered from 105° to 60° and maintained at that level for the remainder of the study. At the same time the temperature of the control room was raised to 100°, held there for 27 hours and then lowered to 60° for the rest of the study. The relative humidity was maintained between 60 and 70 per cent in both chambers.

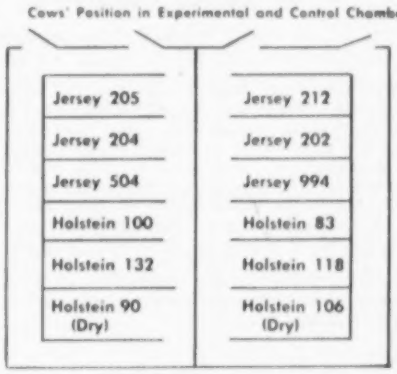
Each cow of the experimental group had a similar "paired" cow in the control group. Each group consisted of three Jerseys in milk, two Holsteins in milk, and one dry, non-bred Holstein.

Fed According To Production

Water of about 60° F. was always available in drinking cups. The animals were fed grain and beet pulp 2 pounds daily (on dry basis) twice daily and alfalfa hay free choice. The grain was fed according to the previous week's milk production, the Jerseys getting one pound per three pounds milk and the Holsteins one pound per four pounds milk. The grain mix fed was: 800 parts ground corn, 460 parts ground oats, 400 parts bran, 300 parts soybean oil meal, 20 parts steam bone meal, and 20 parts salt. Since the animals were indoors continuously, a cod liver oil supplement was fed to supply adequate amounts of vitamins A and D.

The cows were machine milked twice daily in the usual manner. Butterfat determinations were made on alternate days from a composite sample of the morning and evening milkings. But toward the end *(Turn to page 538)*

Cows' Position in Experimental and Control Chambers



MILK PRODUCTION, POUNDS PER DAY

	Jerseys						Holsteins			
Temp. Level °F.	Exper. 212	Contr. 205	Exper. 202	Contr. 204	Exper. 994	Contr. 504	Exper. 83	Contr. 100	Exper. 118	Contr. 132
50	30.2	30.8	27.3	29.6	26.8	24.6	49.1	52.1	50.5	37.0
60	29.1	29.6	25.8	27.1	25.5	23.1	48.6	48.5	48.9	37.2
70	28.1	27.1	25.1	24.7	25.0	21.1	46.5	44.7	46.0	36.8
80	25.5	24.7	23.0	24.6	23.8	18.9	34.3	43.8	45.1	37.5
85	23.8	21.0	23.0	23.0	23.7	18.4	35.9	45.0	43.2	39.0
90	22.0	20.3	19.4	22.2	20.6	16.8	29.9	43.4	36.2	39.5
95	19.0	17.9	13.9	20.0	16.0	17.2	24.5	43.1	28.7	39.3
100	17.6	17.6	10.6	20.2	12.3	14.0	17.4	30.5	19.2	38.8
105	12.7	17.4	8.2	20.0	6.6	15.3	7.6	33.9	9.2	38.3
50-60*	20.4		18.8		19.3		28.4		33.7	

Temperatures given are for Experimental group; the Control group was maintained between 50 and 60 degrees F.

* At end of test, temperature of Experimental group was returned to the Control level.

GRAIN CONSUMPTION, POUNDS PER DAY

	Jerseys						Holsteins					
Temp. Level °F.	Exper. 212	Contr. 205	Exper. 202	Contr. 204	Exper. 994	Contr. 504	Exper. 83	Contr. 100	Exper. 118	Contr. 132	Exper. 106	Contr. 90
50	14	14	13	13	11	10	14	14	13	11	6	6
60	14	14	13	13	11	10	14	14	13	11	6	6
70	14	14	13	13	11	10	14	14	13	11	6	6
80	12.4	14	11.1	13	10.6	10	9.9	14	13	11.4	6	6
85	9	10	8	10	9	10	10	14	12	11	6	6
90	9	10	8	10	9	10	10	14	12	11	6	6
95	9	8	6	10	9	10	8	14	8	11	6	6
100	9	8	6	10	8	7	8	11	8	11	6	6
105	6	8	4	10	4	7	4.5	8	4	11	0	6
50-60*	6.7		5.4		5.4		7.1		8.2		1.9	

Temperatures given are for Experimental group; the Control group was maintained between 50 and 60 degrees F.

* At end of test temperature of Experimental group was returned to the control level.

John G. Carpenter drives three of his 70 purebred Holsteins to the barn.

Living From The Land.... ....Not Just On It

An Orange County, Virginia, dairyman shows how he made the farm he lives on nearly a self-sufficient unit.

WHEN you speak of "living on the land," the reference is usually connected with farming. When you speak of "living from the land," there are added implications to be considered. It's still connected with farming but in a much broader sense. Nearly all the people in the United States live on the land—except for a few isolated cases where they live in a boat and make their living by fishing. And even then there's land somewhere under the boat. When you think of the implications of living from the land—everyone is concerned, either directly or indirectly.

Not many farmers live from just the land they live on. If they're in the wheat area and grow just wheat, they have to buy milk, meat, and most of their other foodstuffs. On the other hand, when you look at a farm in an area where the farming is diversified, the farm itself is almost a completely self-sufficient unit. Such is OakHill farm, the home of Mr. and Mrs. John G. Carpenter in Orange County, Virginia.

Has Diversified Crop System

About half of the 330 acres of hilly land at OakHill farm is woodland. But the other half is divided into pasture, corn, alfalfa, barley, oats, orchard, and buildings. Nearly all the grain and hay needed for the herd of 70 Holsteins is produced on the farm. In addition, the orchards produce all the apples, peaches, and other fruits the Carpenters need for eating fresh and for canning. The berry patches give them all the berries they want. A large garden each year provides vegetables for eating during the summer and for canning a winter supply. A flock of 400 Hampshire Red hens produces eggs to be sold in addition to what's needed on the farm. And, of course, it goes without saying that there's no problem of having enough milk and meat for home needs in addition to the large amount that's sold.

The farm has not always been the self-sufficient unit that it is today. The cropland was once just patches of cultivated crops, spotted at random. There were some cattle on the farm—mostly mixed grades. Now the crops and hay are laid out in strips and the herd consists of 70 purebred Holsteins.

John Carpenter's father bought 230 acres of the hilly land in 1912 and moved there when John was 12 years old. Since that time more land has been added and the original acreage changed by modern farming methods.

Started With Grade Herd

In 1927 the first purebred Holstein bull was purchased and the Carpenters began "breeding up" the grade herd they had. In 1932 John started renting the farm from his father and the next year traded a mixed heifer for a purebred Holstein. That was the actual beginning of the present herd and about half of the present herd traces back to that first purebred heifer that John purchased by trading.

The herd is on DHIA test now and has been the top herd one month out of each of three years in the local association, with 21 herds participating. Last year the average production was 12,486 lbs. milk, 462 lbs. fat on twice daily milking. Forty per cent of the cows making this record were heifers with their first calves. These heifers were all raised on the farm, too, and Carpenter has purchased only three cows since 1932.

Carpenter sells grade A milk to a dairy in Fredericksburg, and as the base for his sales is established in September, October, and November, he likes to have the majority of his herd freshen in the fall of the year. He does not make it a rule to have all of them freshen at that time, however.

Bang's disease has not appeared in the Carpenter herd at any time. Occasionally, over a long period of time, a calf may be lost. Carpenter has found that these losses have all been due to causes other than Bang's. Last year he began vaccinating all of his heifers as a precaution. Carpenter has some trouble with mastitis in the herd and last year sold six cows because of bad cases.

One feeding policy on the OakHill farm is to give the milk cows hay the year around. In summer, in addition to pasture and grain, the cows eat about 10 pounds per day of a mixture of clover and alfalfa, or just alfalfa. Carpenter had only 55 acres of pasture for the herd last year and the hay helped keep up production.

Stopped Selling Grain

Another policy recently adopted on the farm was to stop selling grain. Carpenter tries to raise as much of the grain as possible needed on the farm. The grain ration for the dairy cows is ground and mixed on the farm. Some wheat bran and protein supplement is bought. The grain is mixed at the rate of 3 parts corn and cob meal, 1 part oats, and 1 part wheat bran. Protein supplement is added to each cow's grain when she is fed and is added proportionately according to her production. Each cow gets about the same amount of linseed meal—approximately a pound a day per cow. Two pounds of soybean meal are given each day to the heaviest milkers, with lesser amounts for lower producers. No cow gets over 20 lbs. grain per day. Dry cows are fed about 4 lbs. grain with a little protein supplement added.

Between the 15th of August and the 10th of September Carpenter starts filling the 12' x 40' silo, and the day he starts filling he also starts feeding the green silage to his cows. The silage is usually corn alone and sometimes two-thirds corn and one-third sorghum. The silage is cut as fine as the cutter can cut it. At first, a 5-gallon bucket of the green silage is fed to each milk cow each day. This is increased to 8 gallons a day after a few days. Feeding silage is con-

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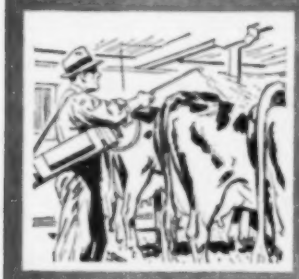

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tinued until the supply runs out, usually about the middle of May.

Most of the bull calves on the farm are sold for veal purposes when they are a day to a week old. The heifer calves are taken from the cow as soon as they are born and fed from a bucket. The colostrum milk is used, and at first the calves receive up to a gallon of milk per day, depending on size. When they are a week old, the milk is gradually decreased in amount fed and after 3 weeks no milk is fed. The calves are by that time started on commercial calf feed and good quality hay, usually alfalfa. Carpenter mixes the commercial calf feed with an equal part of ground oats and when the calves are 10 to 12 weeks old, they are fed only ground oats as a grain ration. They are put on pasture in summer, and kept in a barn separate from older animals in winter.

Rotation System Different

Carpenter's crop rotation system differs somewhat from the normal and is adapted to the farm to help make more crop land available. It is also arranged, however, to keep the soil built up so it will produce good crops each year.

For four years Carpenter has put the same field in this arrangement of crops: Silage corn is followed in the fall by barley. After this barley is combined in the spring, another crop of corn is put in for late fall silage. After this crop of silage corn is harvested, about half the land is plowed (in the fall) and sowed in oats—the other half is sowed with lespedeza or a mixture of ladino and orchard grass. The latter half is grazed the next spring. If it is needed for hay, it is cut and put in the barn. If not it is plowed under for another crop of silage corn.

Needs Much Manure and Fertilizer

To follow such a system requires considerably large amounts of manure and commercial fertilizers. The soil is a "Duke's-mixture of several types," Carpenter says. Two tons of ground limestone are spread on each acre of the farm, including pastureland, every four years. This is usually done in the fall. Manure is hauled out of the barn and spread each day during the winter and about 20 tons per acre applied each year. When corn is planted, 500 lbs. of 2-12-12 is applied to each acre. The corn is drilled in rows 40 inches apart at the rate of one bushel of seed to six acres of land.

In the fall, after the corn has been put in the silo, the barley is sown. The land is not plowed, but a surface tiller is used and the land is tilled two ways, or crossed after the first tilling. Like all small grain on the farm, the barley gets 500 pounds per acre of 2-12-12, applied with the seed. After the barley is off in the late spring, 400 lbs. of 2-12-12 is broadcast and disked in. Another 300 lbs. of the same analysis is put in with the corn planter when the corn is planted for the late silage crop. Corn left in the field which was not needed in the silo, has produced over 100 bushels per acre.

Seeds Alfalfa on Hills

Alfalfa is usually seeded on a hilly piece of land. It is sowed in the fall and the land is prepared with a surface tiller instead of a plow in the first stage. Carpenter says he gets less winter-killing of alfalfa when he does this. The land is then disked and dragged. One-half ton of 0-12-12 containing 80 lbs. borax per ton is spread on each acre and disked in. Carpenter also mixes in with this *(Turn to page 532)*

ARE YOUR COWS WORTH A PENNY APIECE TO YOU?

ACTUALLY it costs even less to give each cow in your herd the daily protection of Nibroc KOWTOWLS, the new, single service paper towels made especially for dairy use.

Think of it! For less than a penny per cow per day, you can help prevent mastitis from striking your herd and lowering your milk profits. You can't possibly spread infection from one animal to another on a Nibroc KOWTOWL because you throw the towel away ... and with it any lurking infection.

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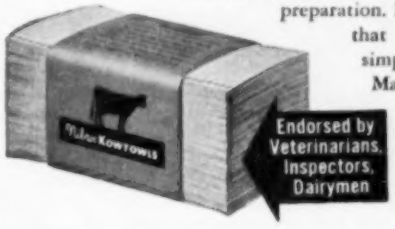

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"COW MINTRATE SPRINKLED ON GRAIN MAKES THE BEST DAIRY RATION I'VE EVER FED—

And costs less than 3½ cents a day per cow"

"Our Guernseys are fed according to their individual production records," says John J. Yeley, Meadowcroft Guernsey Farm, Clark County, Ill. "First the ground grain is measured out for each cow at each feeding, and then the amount of Cow Mintrate needed to balance her feed according to her production is sprinkled over the grain. This way I not only save feed mixing charges, but also on total feed costs because each cow gets only the balanced ration she needs.

"Besides, I use all my own feed I can, and buy only the proteins, minerals and vitamins lacking in grain and hay, but which cows need. I believe these are in Cow Mintrate. Anyway, Cow Mintrate and my own home-grown feed gives me the most economical, high-quality dairy ration I've ever fed. My cash outlay for Cow Mintrate is less than 3½ cents for each cow a day.

"Then, too, since I've been feeding Cow Mintrate the cows keep in thrifty and in top milk-giving condition. They winter in good shape even though production is high, and I have few calving and breeding troubles. I've found that I can't afford to be without Cow Mintrate."

It's easy to balance home-grown grain with MoorMan's Cow Mintrate, says John Yeley. Just measure out the amount each cow needs, and sprinkle it on her grain.

Ask your MoorMan Man how you, too, can balance your home-grown, or other low-cost feeds available locally, by sprinkling Cow Mintrate over these feeds. If no MoorMan Man calls, write Moorman Mfg. Co., Dept. P-7, Quincy, Ill.

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FOR GOOD RESULTS WE FEED MoorMan's

MAKERS OF PROTEIN AND MINERAL CONCENTRATES
FARMERS NEED, BUT CANNOT RAISE OR PROCESS ON THE FARM

Make Yours a Model Milk House

(Continued from page 523)

level and aid in keeping the milk house door dry as most of the water is spilled in these two areas.

Too frequently milk houses are built with no thought of insulation. No one enjoys washing milk utensils in a cold room and when washing is done in a cold room a good job is less likely to be done. Insulation in itself will not add any heat to a building; however, it will help conserve heat released in the building. It is desirable to provide 4 inches of fill insulation in the exposed walls of the milk house and in the ceiling.

If frame construction is used, the space between the 2x4 inch studs can be filled with insulating material. If masonry blocks are used 4-inch furring strips can be used and the space between the blocks and the inside wall filled with insulating material. In either case it is essential that a good vapor barrier be placed on the inner or warm side of the studs or furring strips to prevent moisture from getting into the insulation. Once insulation becomes wet it loses much of its value and may cause the paint to peel off the outside of the building.

A material which is waterproof is not necessarily vapor-proof. Metallic surfaced reflective paper or foils; gypsum lath backed with aluminum foil; asphalt-saturated, glossy finished sheathing paper; smooth-surfaced rolled asphalt roofing; and laminated kraft paper are some materials which make satisfactory vapor barriers. All joints in the vapor barrier must be made on the studs if a tight job is to result.

The attic space above the insulated ceiling should be ventilated. This can be done by means of a louver placed a foot or more below the peak of the roof on the exposed end wall of the milk house. Additional attic ventilation can be obtained by leaving an inch opening between the top of the plate and the bottom of the roof boards.

The so-called dead air space between the studs in a frame building or in the cores of masonry blocks has very little value as an insulator, contrary to popular opinion, because the air in it is not dead but is free to move. The air falls on the cold side of the space and rises on the warm side and in so doing carries heat from the warm side to the cold side. To be effective, air spaces must be so made that air cannot circulate within them. Filling the spaces with insulating material stops the air circulation and thus reduces the transfer of heat.

A well insulated milk house can be kept warm much more economically than one which is not. Keeping the milk house warm with some form of supplemental heat in periods of cold weather has many advantages; it eliminates the danger of frozen water pipes, keeps ice from forming on the floor, provides a comfortable place for washing milking utensils, prevents milking machine parts from becoming frozen, and helps to keep the windows and doors dry. The milk house, although one of the smaller farm buildings, deserves intelligent planning and careful construction.

Repairing drinking cups was a paying proposition for one member in the Moultrie, Ill., DHIA. The water cups were broken and hadn't been in good working order for some time. When they were repaired, production increased 29.4 pounds of milk a day. The cost of the repair bill was $22.00, and for the month of February the increase in milk netted $29.13, making a profit of $7.13 above repair cost.—BLAINE ERHARDT, tester.

"Dat's what boins me up — the load worth a cool hunnert tousand and they gotta hijack my B. F. Goodrich tires!"

It seems as though most truck owners who have tried B. F. Goodrich truck tires built with the nylon shock shield prefer these tires above all others. The patented nylon shock shield saves you money 4 ways: (1) longer tire life, (2) more recappable tires, (3) greater bruise resistance, (4) less chance of tread separation.
This exclusive feature is built into all truck tires with 8 or more plies. Put these tires on your farm trucks and start saving. See the BFG man next time you're in town.

An advertisement of The B. F. Goodrich Company, Akron, Ohio.

500th Ayrshire to Produce 100,000 lbs. Milk

FRANCIS FOSTER of Bath, N. Y., and the trophy that was presented to him at the annual meeting of the Ayrshire Breeders' Association, May 5, in recognition of the outstanding performance of his 100,000-lb. producer, Foster Fields Starlight. She is the 500th Ayrshire cow to become a member of the breed's lifetime 100,000-Lb. Producers' Club.

In less than nine lactations this cow has made 101,465 lbs. 4.01 per cent milk and 4,073 lbs. fat. She has eight consecutive completed yearly records that average 11,990 lbs. milk and 482 lbs. fat (actual). All records were made on twice-a-day milking.

★ ★ ★ ★

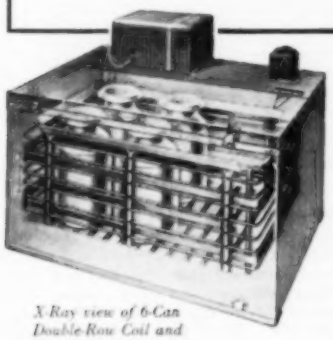
2, 4-D for Ragweed

Killing ragweed to relieve the torment of hay fever is best done by spraying with 2,4-D during July and early August, notes John E. Baylor, farm crops specialist at Rutgers University, New Jersey.

But if ragweed is to be controlled on a community-wide basis, spraying can be started in June and continued through August, he states. More and more communities are making concerted efforts to get rid of ragweed out of consideration for pollen sufferers.

Look Into Frigidaire Milk Coolers!

See how they earn their keep—AND MORE



X-Ray view of 6-Can Double-Row Coil and Rack Model MCL-6D2

Available with Frigidaire Meter-Miser

Coil-and-rack type coolers are powered by the Meter-Miser—famous as the simplest refrigerating mechanism ever built. This unit, which has set records for thrifty, trouble-free service in millions of Frigidaire refrigerators and other products, is protected by a 5-Year Warranty.

Fast cooling helps you collect premium milk prices

A Frigidaire Milk Cooler helps you meet the strictest regulations, helps you collect premium prices for low bacteria count milk. That's because a Frigidaire Cooler brings milk to below 50° in one hour or less, checks bacterial growth by cooling the whole can—top to bottom!

There's a Frigidaire Milk Cooler that meets your needs

You'll find a cooler exactly right for your requirements in Frigidaire's wide range of models, 3 to 12 can capacities. Coil-and-rack and drop-in type cabinets. Self-contained and remotely installed compressors. For details see your Frigidaire Dealer. Or write—

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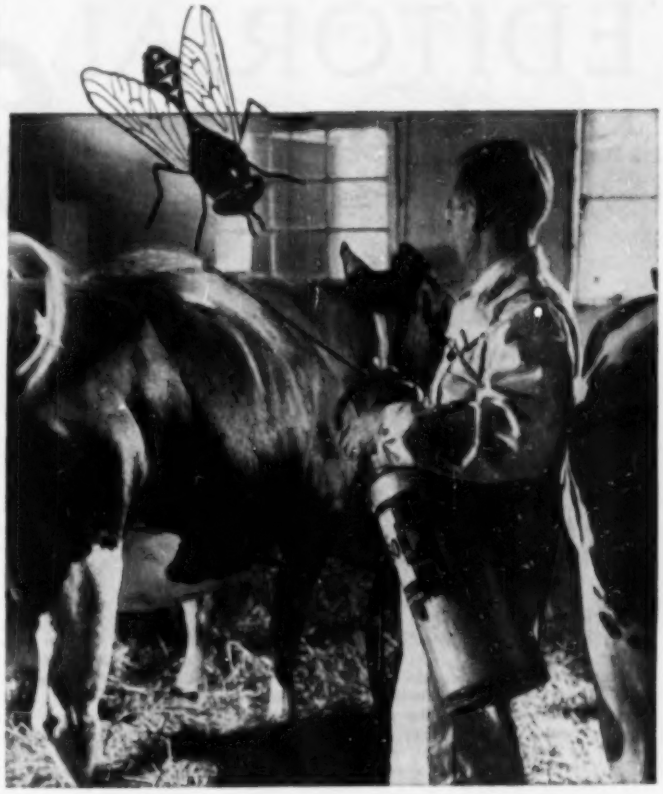

WHICH DAIRY INSECTICIDES CAN YOU

Spray Safely

YET STOP INSECTS AT LOW COST?

So far as extensive herd tests by impartial investigators can determine, only *one* group of insecticides teams up real safety with high effectiveness against *all* dairy insects. That is the group of popular-brand oil and water emulsion sprays based on *Pyrenones*. These insecticides leave no toxic residues harmful to humans or warm-blooded animals. Used as directed they're entirely safe for use on cows and young calves, in milk rooms and other buildings. They won't contaminate milk or meat.

AND — Pyrenone-based insecticides are unique in the speed and completeness with which very low-cost dilutions kill horn flies, stable flies . . . even the highly resistant horsefly.

HELPFUL FREE BOOKLET contains many tips on economical insect control. Write for your copy of "Controlling Insects on the Dairy Farm" to *U. S. Industrial Chemicals, Inc., 60 East 42nd St., New York 17, N. Y.*

LOOK AT THE LABEL of the insecticide you use. It should say "contains Pyrenone," or the ingredient statement should show

ACTIVE INGREDIENTS
Piperonyl butoxide
Pyrethrins

Pyrenones*

*Registered U. S. Patent Office

EDITORIAL COMMENT

WISCONSIN PREPARES TO PROTECT ITS MARKETS

IN MID-JUNE many Wisconsin newspapers broke out in a rash of spectacular stories, the headlines of which were enough to scare the wits out of any dairy farmer with a positive Bang's herd. Following are two headlines: "Cattle Slaughter Urged to End Bang's Disease" and "Kill Off Cows With Bang's Disease to Control Spread."

It is a fact that many of our major metropolitan markets will soon accept milk only from Bang's free herds. Chicago, for example, has set January 1, 1955, as its deadline. Since Wisconsin exports to the Chicago milk market alone over $70,000,000 worth of milk annually, the Wisconsin dairy farmer could be placed in a very rough situation were plans not made now to get the herds cleaned up in an orderly manner and be prepared for such deadline dates set by the larger markets.

In addition to Wisconsin's present individual herd supervision and compulsory county and/or township area program, the greater part of the state is under the voluntary township area plan where at least 75 per cent of the cattle owners in a township have petitioned for service from the state, either under Plan A or Plan B. Plan A is test and slaughter, with or without calfhood vaccination. Plan B is calfhood vaccination alone.

In the interest of Wisconsin dairymen, the director of the State Department of Agriculture, D. N. McDowell, submitted to the members of the Agricultural Committee of the Legislative Counsel a written summary of a Bang's disease control report. This report was prepared, not by McDowell, but by well qualified veterinarians and disease control officials experienced in brucellosis control and eradication.

The program posed for consideration would replace the township area and individual herd service with county area programs only. It would make elimination of infected animals dependent upon the per cent of infected animals in each herd. Under the plan, when 10 per cent or less of any herd is found to be infected, all reactors would be removed. If more than 10 per cent is infected, the 10 per cent would be removed but any over that figure could remain for a maximum of three years to allow time for raising and obtaining replacements. Indemnity would be allowed for the initial reactors as well as those removed within the three-year period. It further provides that replacements in infected herds would be restricted to the more resistant animals, such as calfhood vaccinates or vaccinated heifers of a certain age, negative to test. It is further proposed that adult vaccination be discontinued and that removal of reactors might be mandatory when those reactors endanger neighboring farmers with clean herds.

Although we disagree with some of the recommendations, we respect the proposal of Director McDowell and his advisors as an honest and direct effort to protect Wisconsin dairy farmers from losing their markets. In practice, and on the farm, the new program would mean that in 20- or 30-cow herds no more than two or three head might be required to be removed. Any number infected above this would be held in the herd at the owner's discretion until such time as resistant replacements might be brought in to take their place in the milking line. Looking at the Department of Agriculture's proposal in this light, it certainly isn't the mass slaughter program indicated by the newspaper headlines.

We do differ with the Wisconsin Department of Agriculture on the new program. Frankly, we think it is a mistake to keep changing a Bang's control program every two years or so. It is hard enough for veterinarians and disease control officials to keep abreast of changing laws and requirements, without expecting 160,000 dairy farmers in Wisconsin to keep up with every new proposal and piece of legislation enacted.

The present Wisconsin Bang's control program can be strengthened. As we indicated when it was enacted, we believe that Plan B should be strengthened by requiring periodic tests of Plan B herds. The testing should not, by any means, require slaughtering of the animals but if the state is to know what benefits it is deriving from its expenditures in brucellosis control, it has to have some measure of the incidence of infection. We are not enthusiastic about the 10 per cent slaughter provision. It would be costly and, in our opinion, equal results might be achieved if every dairyman were under Plan A or amended Plan B. We question, too, the elimination of adult vaccination. Otherwise, the proposals are excellent and, if incorporated in present legislation, they would not be confusing.

If all Wisconsin dairymen were following Plan A or amended Plan B, we would have every assurance that in three or four years the state could be practically 100 per cent free of this disease. This takes into consideration, of course, that rigid regulations would be enacted to control public sales and truckers of livestock. We believe such a program would not be burdensome whatsoever on the dairy farmer. It would be a low-expense program to the state compared to a quick test and slaughter program. It would prepare Wisconsin's dairy farmers to take advantage of the rigid requirements of metropolitan milk markets effective January 1, 1955, earlier or later, as the local milk market might determine at the time of its adoption of the recommendations of the U. S. Public Health Service.

Leaders of the Wisconsin breed associations, dairymen associations, and farm organizations are cooperating with the Department of Agriculture to build a program that will best serve Wisconsin dairymen. As this program is being developed, whether by substitution or amendment, interested dairymen should make their feelings known to their farm organizations or breed associations and keep in mind always that there is one ultimate objective, that of living without Bang's disease.

★ ★ ★ ★ ★ ★ ★ ★ ★

A HEIFER OR A COW?

WHEN does a calf become a heifer? When does a heifer become a cow? These two deceptively-simple questions were put to us by T. E. Milliman, New York dairy farmer. Apparently, some farm folks have been having a lot of fun with the Census Bureau because in the recent census it asks, "How many cows and heifers were milked yesterday?". Fun-loving dairymen wrote the Bureau that one does not milk a heifer; a heifer is, so to speak, a maiden. They wrote that a heifer does not give milk until she has calved, and when she has accomplished that biological feat she becomes a cow.

We have always referred to individual two-, three-, and four-year-olds as heifers, using the phrase in its entirety, a three-year-old heifer. It has been our position that a cow does not reach maturity until she is five years of age and, in the case of Brown Swiss, perhaps six years of age. Although we may have been wrong, certainly we have not been more confused than the writers of the dictionary or the Encyclopedia Britannica.

The learned writers of Webster's New International dictionary describe the cow as, "The mature female of wild or domestic cattle of the *Bos*, or of any of the various animals the male of which is called *bull*, as the moose, certain of the seal kind, the terrapin, etc." A heifer is defined as, "A young cow; a cow that has not had a calf." A calf, according to Webster's, is, "A bovine animal past the vealer stage but not attained to sexual maturity."

Note that a cow is defined as "the mature female." Since the animal does not reach maturity until five or six years of age, what is she called between the time of first calving and the time of reaching maturity?

Similarly, the scholars do not tell us when a calf becomes a calf. Apparently, they have a different name for the young during the so-called "vealer" stage. Neither have they defined for us the time when the calf, or whatever they wish to call it, reaches sexual maturity.

Frustrated by Webster, we turned to the Encyclopedia Britannica. The cowardly writers, apparently, ducked the issue by failing to even include the word "cow" in their listing. Under "heifer," though, the writers project a seven-word definition, "A young cow that has not calved." The scholar who proposed this treatise has, undoubtedly, been honored with the Order of the Green Fountain Pen.

Dissatisfied with Webster and the Britannica, we turned, with hope, to the learned professors who have written texts on dairy cattle, dairy cattle management, and dairy farming. To the extent of our search, we found the authors lacking even the courage of the Webster or Britannica writers. Not only did they fail to offer definitions but they scrambled their terminology in a most confusing manner.

Our search came to an abrupt halt when one of the staff members posed the added question, "When does a girl become a woman?"

We passed.

AGE

WHAT is meant by age, by growing old? Certainly it must be something more than mere lapse of years. Grass is old when it ripens, when it ceases to grow, when it has reached maturity. It may be so with the human frame, the mere physical body, but even this does not decay at once, like the grass, and return to its original, inorganic elements. Rather, it persists and under favorable circumstances retains its vigor and performs its allotted functions for many years.

But how about the indwelling mind,—the thinking, reasoning self? When does the grip of age and the vise of years lay hold upon it? Robert Louis Stevenson says that "to hold the same views at forty as we held at twenty is to have been stupefied for a score of years." Or, as that keen-witted philosopher, Hiram Smith, once said, when challenged for change of opinion on certain phases of the dairy industry, "Not to have learned anything in ten years is to admit that one might as well have died then."

That is it. When one ceases to learn, when he is content to follow in the same old path year after year, unmindful of the developments on either side, of the realignment of forces so that they may become his servants for the asking, he is old. Further progress is impossible; decay is inevitable.

Tell me what you eat and I will tell you what you are. The destiny of a people depends on the nature of its diet.—A. BRILLAT-SAVARIN, 1775-1826.

45th Meeting of ADSA

SOME 1,500 college dairy specialists and their families and others connected with the dairy industry from all parts of the United States met at Cornell University late in June for the 45th annual meeting of the American Dairy Science Association. Nearly 150 scientific papers dealing with dairy cattle research were presented during the three-day meeting.

At the annual banquet four men received awards for outstanding research and service in the field of dairy science. Winner of the Borden Dairy Production Award was Dr. Samuel Brody, professor of dairy husbandry at the University of Missouri. Dr. Brody was cited for his contribution to the knowledge of the fundamental energy metabolism of the dairy cow and for his work on the effects of growth and aging upon domestic animals.

Winner of the Borden Dairy Manufacturing Award was Dr. Walter Van Price, professor of dairy industry at the University of Wisconsin. Dr. Price was cited for his contributions to the technology of cheese manufacturing; his pioneer work on pasteurized milk cheese; the control of flavor during storage; and development of cheese testing methods. Dr. Price has been in teaching and research for some 25 years and has authored or co-authored almost 100 scientific and popular papers, reports, and bulletins.

The American Feed Manufacturers' Association Award for outstanding contribution to dairy nutrition research went to Dr. J. Thomas Reid, associate professor of animal husbandry at Cornell University. Dr. Reid's research has included studies of anemia in dairy cattle, cobalt and magnesium deficiencies, and calcium, phosphorus and manganese metabolism in cattle.

The Honorary Membership Award of the ADSA for 1950 was made to Dr. Martin John Prucha, professor emeritus at the University of Illinois. This award is given to a member of at least 20 years' standing who has made notable contributions to the industry and to the association. Dr. Prucha has done research largely in the field of dairy farm and dairy plant sanitation.

Among the resolutions adopted by the dairy scientists was one urging research and educational agencies, both public and private, to develop new and improved ways of using milk and its byproducts; and to bring to the attention of consumers the high nutritional value and economy of using more dairy products.

Another recommendation called for a committee to develop a dairy curricula to meet present day needs more completely for young men planning to enter the industry. Provision for presenting economic and marketing papers at annual meeting was also recommended.

New officers of the association are as follows: President, R. B. Becker of the University of Florida; vice president, Dr. H. A. Bendixen of Washington State College; and two directors, J. Hoffman Erb of the Borden Company, Columbus, Ohio, and Dr. L. A. Moore of the U. S. Bureau of Dairy Industry.

Burning woodlots, marsh lands, and fence rows is about like burning money. Michigan State College specialists point out that soil needs the humus and birds and wild game need the cover.

for the Dairy Farmer using PORTABLE SPRINKLER IRRIGATION with Reynolds Aluminum Pipe

DOES your milk production drop during summer dry spells? It doesn't for farmers with portable sprinkler irrigation systems. An Oregon user reports he paid for his system the first two years from his increase in butterfat. A Georgia dairyman advises he received from 1½ to 2 gallons more milk per cow per day from irrigated pastures.

Reynolds Aluminum Irrigation Pipe helps put extra profit into your portable sprinkler system. It is light to handle—one man can carry two 20-foot sections. It is made right, too—perfectly round for fast, easy coupling; has smooth walls for free flow. The high strength aluminum alloy withstands heavy-duty service and assures long life.

Why pray for rain when you can plan for it? See the dealer in your community who sells Reynolds Aluminum Irrigation Pipe. He is qualified to plan your portable sprinkler system. He knows local conditions and will tell you exactly the type and size system for the highest return on your investment. We'll be glad to send you his name and our new irrigation booklet. Just return this coupon.

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Please send your new illustrated booklet on the applications and advantages of portable sprinkler irrigation. ☐ Who is my nearest dealer?
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IF YOU SEE RUST...YOU KNOW IT'S NOT ALUMINUM

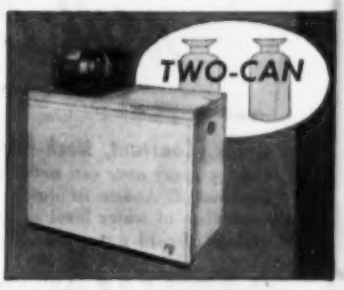
HERE'S HOW

De Laval Gives You Fast Cooling at Low Cost

The De Laval Speedway Milk Cooler cools by circulation. Forced circulation of cold water removes heat faster than still water. Hence, less power is required to cool a given quantity of milk. This saving of power consumption over other types as established by comparative tests represents real money. Furthermore, in the De Laval circulating water system no ice is formed. 70 to 80 gallons of cold water are circulated around the cans per minute.

And For You Smaller Herd Owners Here's The De Laval Speedway Milk Cooler Built Especially For You . . .

- Low-priced Cooler
- For Smaller Herds
- Ideal for Cream Producers
- Two 10-gallon cans or three 5-gallon cans
- Cools Cream, Too!
- Cools from 90° to 50° in One Hour
- Speedway "Drop-In" Unit



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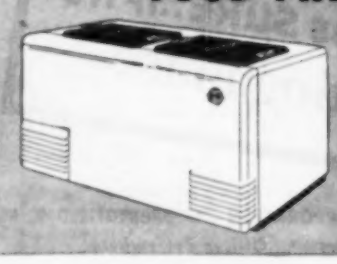
Better Meals the Year 'Round
with the DE LAVAL SPEEDWAY FOOD FREEZER



Better table fare, at lower cost, with less work, and brought to you by dependable De Laval Speedway Food Freezers, which are designed especially for farm use. Three sizes—8, 16½ and 35 cu. ft.

★ ONLY PROPERLY COOLED MILK IS QUALITY MILK ★

NEW!

POLAR-COLD

Booster Spray*

For Westinghouse Milk Coolers

Quick, Constant, Neck-High Cooling: Floods continuous icy spray over can necks when less than normal loads are cooled. Assists in quick, efficient, neck-high cooling, regardless of water level or cabinet loading. Circulates 80 gallons of cold water per minute.

NEW! ANOTHER WESTINGHOUSE ACCESSORY EZ-does-IT HOIST* FOR WESTINGHOUSE MILK COOLERS

Saves Time and Energy: Does away with back strain . . . backaches. So simple a child can hoist heavy milk cans. Just hook up the can, turn the crank . . . up and into the Cooler goes the can. Self-locking . . . no danger of slipping. Tough, galvanized, woven-wire cable for heavy loads, long life.

*See these new Accessories and Milk Coolers at your Westinghouse dealer today

YOU CAN BE SURE..IF IT'S Westinghouse

WESTINGHOUSE ELECTRIC CORPORATION • SPRINGFIELD 2, MASS.

Plants in 25 Cities • Offices Everywhere

Living From the Land

(Continued from page 527)

fertilizer five pounds of orchard grass seed per acre, and it is disked in with the fertilizer. From 20 to 30 pounds of alfalfa seed per acre is then sown from a seeder box placed on top of the soil pulverizer. The pulverizer not only works up the ground but covers the alfalfa seed. A flat drag is hooked to the pulverizer and follows in the operation.

When Carpenter began contouring and strip-cropping on his farm four years ago there were deep gullies in the hay fields that could not be crossed with a hay loader. An attempt was made to stop them with brush but it was unsuccessful. "When it rained, the gullies looked like small rivers," Carpenter says. Now, when it rains, little water runs off and that which does is not as muddy as it once was. The gullies are grassed and level and are used as roads to the different strip fields. The strips on the farm average in width about 20 corn rows, although the width varies according to the slope of the land.

Variety of Pastures

Pastures on the farm vary in content from orchard grass and timothy to bluegrass, lespedeza, or clover. Pastures are top-dressed every other year with 500 lbs. 2-12-12. Under TVA practices, some of the pastureland has received 175 pounds per acre of 20% phosphate every 5 years. Carpenter also has a four-acre test plot where different amounts and types of fertilizers are being used to determine the effect on pasture. The additional nitrogen in 3-2-6 has shown the most marked improvement on the test plot.

Carpenter has used ladino in both pastures and hay fields, but had trouble with it in his alfalfa this year. It was so thick it was difficult to cut. In the pastures, it seemed to cause bloat among the cows frequently. Ladino is still used but never more than two pounds of seed per acre is sown.

Cattle Get Good Care

In winter, when outside field work is finished and work is more limited to the herd, the cows are kept in a large barn in stanchions. They are milked with mechanical milkers and are stripped after the machines are removed. The milking herd usually numbers around 30 head. Cows are kept heavily bedded and chaff and straw are used in the gutters to absorb liquid manure.

The cows' udders are washed with individual cloths before milking, and teat cups of the three single unit milkers are dipped in a disinfecting solution between cows. Milk is cooled by setting the cans in 32 degree water.

Carpenter installed drinking cups in his barn and kept an accurate record of the increase in milk production as a result. He says that records show the increase in production paid for the water system and cups in two months.

It's quite a job to keep up with work that needs doing every day and Carpenter has 2 full-time hired men. He keeps busy himself and fills up his "spare minutes" by serving as president of the local community fair and vice-president of the combined Orange and Madison County Farm Bureau. He has also served on the AAA committee in the county since its organization. No doubt these added efforts help spread the gospel of good farming—and the knack of knowing how to live from the land—and not just on it.

GEHL Forage Harvester

FIRST in Performance and value per dollar!

The Gehl Forage Harvester is a natural for corn . . . makes better silage in less time with fewer men . . . no air pockets . . . no spoilage. Gehl clean, uniform cutting makes the difference. Ask a Gehl owner . . . he knows.

GEHL LEADS . . . Sells more forage harvesters than any other specialized manufacturer . . . *It's a 3-Way Harvester.* One basic unit takes (1) row-crop attachment for corn, cane, etc.; (2) hay pickup for windrowed hay or combined straw; (3) mower bar . . . cuts, chops and loads standing hay crops for grass silage or dehydration. *Powered 2 ways*—with own motor, or power take-off from tractor.

A COMPLETE JOB FROM FIELD TO STORAGE

Gehl Blower elevates to highest silo or mow. Accessory power take-off from blower, or separate electric drive, operates *Gehl Self Unloading Wagon*, and others.

Find Out Why Gehl Is First . . . Mail Post Card for FREE Wagon Box Plans using Gehl Parts Kit, colorful booklet . . . and name of nearest dealer.

GEHL BROS. MFG. CO. Dept. MG-523, West Bend, Wis.

There's Nothing Better Than a GEHL

Save up to 1/2 on KNIVES for
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Make and Model Number	Each
Papec N, E1, Blizzard 5010	$3.00
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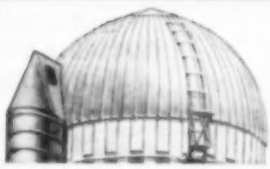

RAILOC MODERN STREAMLINED metal dome roofs now available to fit all silos and grain bins from 8 to 21 ft. Also silo chutes, ladders and platforms.

Write for circular and name of nearest dealer.

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1st SHOW-SALES

If you intend showing your cattle at Fairs or sending some to Sales let us send you our Catalog II. A complete line of Show Blankets, Halters and Show Accessories.

THE MOORE BROS. CORP.
Albany 6, New York

Poultry Problems

H. H. ALP

Summer Management of Pullets

ALL INDICATIONS are pointing to a strengthening of the egg market and by fall we are hoping that we will have prices much more favorable for the producer of quality eggs.

For this reason it should pay especially well to give growing pullets the best of care this summer and to take every precaution to avoid neglect.

Summer Feeding

Cafeteria Method. Hopper feeding of grain and mash free choice to young pullets is probably the most common feeding method in use today. This plan is to be recommended because it is simple, saves labor, permits individual birds to cater to their appetites, and is by far the cleanest of all methods. Its value depends a great deal on the type of range feeder used, however. Hopper feeding of whole oats to pullets seems to be increasing in use as a supplemental feeding practice and is advisable.

Restricted Feeding. The growing pullet digests its feed rapidly; the feed passes through the digestive tract in four or five hours. The best natural defense a pullet has against intestinal parasites such as tapeworms and coccidia comes from having adequate feed to maintain a degree of health sufficient to offset the harmful results from such parasites.

There is no substitute for feed and water in growing healthy pullets. There may be instances when certain parts of the ration may be restricted; for example, some poultrymen do at times resirict the mash portion of the ration, but it should not be done unless one is experienced enough to judge when and how long it should be restricted. For the average flock owner, the best plan is to keep feed—both mash and grain—and water always available!

Pullets Need Plenty of Vitamin A. Fortunately this vitamin is present in most green feeds or crops. If the pullets are kept on a range of good bluegrass, alfalfa, or the like and are getting a mash mixture which includes alfalfa leaf meal, there is little reason to be concerned about vitamins.

Pullets Need Plenty of Water. On a pound-for-pound basis pullets will require about twice as much water as feed—two pounds of water for one pound of feed. The use of containers large enough to hold at least two days' supply of water is strongly recommended. Do not be concerned about how cold the water is; the main point is to have plenty of clean water.

A good type of watering device for pullets out on range is the barrel arrangement which usually consists of a barrel or a drum, approximately 30-40 gallons capacity, equipped with an automatic float attachment which permits the water to flow into the trough or container as needed. The barrel is usually mounted on skids so that it can be moved by tractor or horses.

Grit and Oyster Shell for Pullets on Range are both desirable and often poultrymen neglect to provide them. Grit may be dispensed with if the pullets are on a range where the soil is naturally gravelly or sandy.

Miscellaneous Suggestions

Cull Growing Pullets. "Spare the rod and spoil the pullet." Never be sentimental about sick or runty pullets; there are some in every flock. Keep a stick handy and knock them on the head. Do not try to run them down; the chances are they will run you down. Do not let them hang around; get rid of them.

Watch for Lice on Pullets. Pullets can and do become infested with body lice; just how may be a hard question to answer. A good crop of lice usually means a poor crop of pullets. Sodium fluoride powder is excellent for treating individual birds. Two applications of nicotine sulphate solution on the roosts will also help to eliminate lice.

Protect Your Pullets Against Sudden Storms. Always keep a weather eye open for hail, rain, and wind storms. Many pullets are lost each year in storms. Range shelters afford more protection than the ordinary brooder house because pullets can get into them faster. They are also more apt to be roosting in them than in a brooder house at the time of the storm.

Range Nests for Pullets. One of the best ways to teach your pullets to use nests is to provide them early. Having a few nests, or a battery of nests, on the range not only will help to train the pullets to use them but will save you considerable time and trouble in gathering eggs laid on the range. Besides it will save the eggs, too.

A Toss-up

Sambo—Mose, what am de best breed o' chickens?

Mose—Al kinds ja got merits. De white ones is de easiest to find but de black ones is de easiest to hide.

HABCO Announces
THE GREATEST DEVELOPMENT IN CROP CONDITIONING EQUIPMENT
The COMPLETE DRYING UNIT
"Jet-Dri" Crop Drier & Drying Bin
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Dairy Farm Home

By Marian Pike

It's a year-in and year-out favorite with everybody!
It's good for breakfast, dessert, or with meat!
It's good for baby — it's good for gramp!
It's easy to fix — it's inexpensive!

Quick-cooking tart apples are being made into sauce for canning.

Please Pass The Applesauce!

HOT and spicy, or cool and soothing—there's nothing like fresh applesauce. It's a dish which may be served to anyone at any time, with no apologies. It is admirable as the breakfast fruit; it makes a healthful and refreshing dessert for lunch or supper; and it is the perfect flavor accessory for meats like pork, chicken, beef, or lamb.

Applesauce is a pretty dish to set before the king of your household. But it is inexpensive, too, especially if there are a few faithful old apple trees in your back yard.

From now on, tasty apples are available that are begging to be preserved in one way or another. Pickles, butters, jellies, all will find their way into gleaming glasses and jars at your house. You may even press your old cider mill into service, if you have a really large quantity of apples to use. For the pickles, you will use the smaller crabapple type of apples. For the butters, you will prefer apples that mash up well, such as Duchess. For the jellies, tart apples will be used. It is to be remembered that apple jelly may be made successfully from just the parings and cores of apples used in other canning. Of course, all faulty parts will have to be discarded.

But the big staple is applesauce. It should be put up in quantity, not only for serving "as is" but also for incorporating as the flavor ingredient of many other treats.

If you have space, you may want to freeze some applesauce. Prepare it as you would for table use, pack into regulation containers, quick-freeze it, then store in home freezer or at the locker. Varieties of apples which are usually recommended for home freezing are: Jonathan, Grimes Golden, Edgewood, Willow Twig, and Wealthy.

When you select apples for canning, be sure to pick quick-cooking ones, and that means tart ones. The tarter and tastier the apple, the more quickly it will cook, and the better the sauce will be. Firm, juicy, smooth-textured apples are what you are looking for. Later in the season, the small apples will be the juiciest.

Here is an easy way to can applesauce:

Wash and quarter apples removing all bruised or decayed parts, and the blossom ends. It is not necessary to peel or core the apples. Put them into a large kettle with half as much water as apples. Cover the kettle, bring to a boil, reduce heat but allow to continue to boil for 15 minutes. Press the pulp through a sieve, colander, or a food mill such as the one pictured.

To each four cups of apple pulp, add ¾ cup sugar. (This is necessarily an average measure. You will need more or less sugar depending on the ripeness of the apples you are using.) Boil apple pulp and sugar together for three minutes. (Now add whatever spice you like, less than you would use if you were serving the sauce fresh.) Pour into hot, sterilized jars to within ½ inch of top. Seal according to type of jar, then process at once in a boiling water bath for five minutes.

At the bottom of this page are listed three

APPLESAUCE NUT BREAD

Sift together:
- **2 cups sifted all-purpose flour**
- **2 teaspoons baking powder**
- **¼ teaspoon baking soda**
- **½ teaspoon salt.**

Cream together:
- **1/3 cup shortening**
- **2/3 cup granulated sugar.**

Beat until smooth, fluffy, and no longer grainy.
Add, one at a time, 2 eggs.
Beat well after each addition.
Add dry ingredients, alternately with 1 cup applesauce.
Mix well after each addition.
Stir in 1 cup chopped nut meats.
Pour into buttered loaf pan 8x4x3 inches.
Bake in moderate oven (350°F.) 45 minutes—or until top springs back when *lightly* touched.
Let cool in pan.
Slice and serve with butter, or cream cheese.

APPLESAUCE REFRIGERATOR COOKIES

Cream together until no longer grainy:
- **1½ cups shortening**
- **2 cups granulated sugar.**

Beat in thoroughly: 1 egg.
Sift together:
- **4½ cups sifted all-purpose flour**
- **1 teaspoon baking soda**
- **¼ teaspoon salt**
- **1 teaspoon cinnamon**
- **½ teaspoon cloves**
- **½ teaspoon nutmeg.**

Mix into creamed mixture alternately with 1 cup thick, unsweetened applesauce.
Add: 1 cup chopped nut meats.
Mix into stiff dough.
(You may need 5 cups of flour, depending on the thickness of the applesauce.)
Form into rolls. Wrap in waxed paper.
Store in refrigerator. Slice thin and place on buttered baking sheet.
Bake in moderate oven (375°F.) for 15-20 minutes.
Yields at least 100 cookies.
(Recipe may be halved successfully. Use one small egg or the yolk only of one egg.)

ROLLED APPLESAUCE CAKE

Beat until thick and lemon-colored:
- **3 eggs.**

Gradually beat in ¾ cup granulated sugar.
Stir in ½ cup sweetened applesauce.
Sift together:
- **1 cup sifted all-purpose flour**
- **½ teaspoon baking powder**
- **¼ teaspoon salt**
- **¼ teaspoon baking soda**
- **½ teaspoon cinnamon**
- **¼ teaspoon cloves.**

Blend dry ingredients into first mixture.
Line bottom of shallow baking pan (10-x15 inches) with waxed paper and pour in batter.
Bake in moderately hot oven (375°F.) almost 20 minutes.
Sift confectioners' sugar over a sheet of brown paper. Turn baked cake out on brown paper. Remove waxed paper from bottom of cake. Trim edges quickly. Roll up like jelly roll while still warm.
While cake is cooling, blend together:
- **2 3-oz. packages cream cheese**
- **3 tablespoons sugar**
- **1/3 cup orange juice**
- **1 teaspoon grated orange rind.**

Unroll cake and spread with filling. Roll up again. Cut in 1-inch slices to serve. Top with whipped cream; 8 servings.

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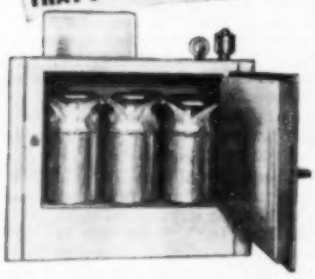

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recipes which use applesauce as the flavor ingredient.

You have probably made many fruit and nut loaves like banana, raisin, or orange bread. The applesauce nut bread listed is a fruity, nutty loaf which will keep well and which is grand to have on hand for snack sandwiches or for unexpected tea or coffee guests.

The recipe for applesauce refrigerator cookies is a large one. One hundred cookies is a modest estimate. You may find the recipe yields quite a few more cookies than this if you slice them thin. And thin you will want to slice them for that is part of the secret of their deliciousness.

The rolled applesauce cake may be stretched to as many as 10 servings. It keeps very well, as do all types of foods made with applesauce. Be sure to bake it in a very large, very shallow pan. If your cake is too thick, it is more likely to crack when you try to roll it. You may want to try turning the baked cake out on a damp cloth and rolling cake and cloth both up together. This is an old jelly roll trick, of course, and in effect your applesauce cake is a jelly roll. In the filling, you may use pineapple juice if you like. Or for extra tartness, you might use part grapefruit juice with part orange juice.

An apple a day, in the form of jelly, cake, cookies, or what-have-you, keeps the menfolks telling you what a fine cook you are.

Take the Children Along On the Trip

Taking the youngsters along to share the travel experience is a fine way to build good family relationships, says Mildred Dorr, child development specialist at the University of Wisconsin. But it's wise to have a store of games to play along the way, since traveling in a car or train usually means the children won't be able to engage in the active play they're used to.

Here are some suggestions from Miss Dorr to help keep the youngsters amused and happy:

The "Find 10" game is fun, and the object to find can be changed at will. It may be cats, white houses, or haystacks. One child can be assigned the left side of the road and another child can take the right.

Geography is an oral game that will make long automobile trips seem shorter. The players first decide on a geographical subject such as rivers, states, or cities. For example, if cities are chosen, after the first word is called out, the next city named must begin with the last letter of the preceding city. If Madison were called, the next city named might be New York and then Kenosha. No names may be repeated and when a player can't think of a city he drops out of the game.

Telling an endless story is fun, too. The person who starts the story stops at an exciting place and the next person takes over. Then he stops at an unexpected place and someone else continues.

Miss Dorr also suggests keeping a "log" or story of the trip. She believes that family members should take turns at writing up the day's happenings at the end of the day. Even the smallest child can tell what should be put down, and the account of the trip will be fun to have later.

2009. Begin your basic fall wardrobe with a simple basque jumper and tie collar blouse — such as this! Sizes 10-20. Size 16 jumper, 2⅓ yds. 54-in.; blouse, 2¼ yds. 39-in. fabric.

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Junior Dairymen

Let's Get Ready For The Show Ring Now!

By Olaf J. Kjome

Make Your Own Calf Blanket

JUST glance at the two drawings on this page—then come back to this column. We'll tell you how you can make your own calf blanket from materials you have right at home.

You need only two basic materials to make this blanket:

1. A gunny sack or two, depending on the size of your animal.
2. The leg from an old pair of overalls.

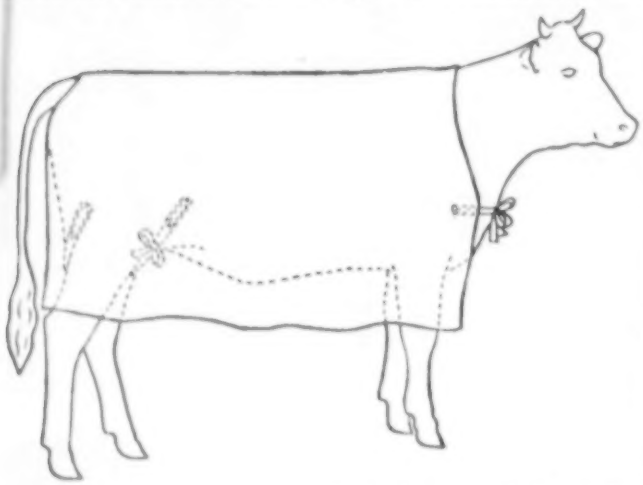
If your animal is just a calf, a single gunny sack may be big enough. Just pull out the thread in the seams, and slip the sack over the calf's back as shown in the drawing on this page. Then use safety pins or chalk to mark where the leg and neck straps should go—again looking at the drawing to get a general idea.

Now you're ready for the straps. Take the leg from an old pair of overalls and pick out a place where you can rip off a good, long strip about an inch and a half wide. This strip should be doubled, and if Mother will do it, or if you know how to operate the sewing machine, the doubled strips should be sewed together along the side where the edges meet. This will make a strong strap.

As to the length of the straps, you can judge pretty well yourself when you figure that you need about three inches to sew to the blanket, and enough at the other end to tie into a bow knot. Of course, you can put rings and snaps on the ends of the straps if you prefer that to tying, but it will mean extra cost. Without rings or snaps the blanket may be made without any immediate outlay of cash.

If your heifer or bull is too big for a "one-sack blanket", you can cut a strip from another sack and sew it on to the first. You may have to sew a strip both on the end and along the side so that the blanket is long enough to cover the animal from the tailhead to the little crease in the neck ahead of the withers, and wide enough to cover from the withers down to the knee.

If your animal looks pretty shaggy, you may want or need more than just a gunny sack blanket. If this is the case, you can still make the blanket as outlined and then stitch on the inside a piece of old flannel or other bed blanket you may have around the house. The inner blanket shouldn't be of too tight a weave, as it may keep your animal hot and uncomfortable. Old, somewhat worn blankets are best, as they are usually more "airy."



Even if you may be able to afford buying a good blanket, this home-made one will do the job until you take your heifer to the show. A blanket gets dirty easily during the early training period and this home-made one can be washed easily and used again. After you get to the show and your heifer is on display to the crowds of spectators milling through the barns, you may wish to use a better looking blanket.

THIS article will not deal with the selection of the calf, but we will assume that you have been fortunate to secure a promising heifer of your favorite dairy breed, born at the right time of the year to secure maximum age for its class. We will discuss some of the methods and details that have proven successful in getting a selected animal into the best condition for show ring competition. At the same time we want to emphasize that this conditioning and fitting process, in order to make common sense, must have for its object the goal of helping to develop this dairy calf into a cow of constitutional vigor, frame, capacity, and, above all, dairy conformation. While we usually think of the fitting as a six- or eight-week period before show season, it actually in many ways becomes a year-round affair.

Feeding

Right here it is important to give you this warning—Don't ruin your calf for future usefulness by overconditioning! You can get your calf or heifer too fat. Too much fat around the throat, over the shoulders, and around the pin bones is undesirable and definitely interferes with proper development of the heifer. Our ideal is to have just enough flesh to show to advantage and still retain an angular appearance and get the maximum growth and development.

Here the use of good roughage is important. A mixture of grass and legume hay is preferable to straight alfalfa or clover. As a general rule, dairy calves are better off not to be fed skimmilk after four months of age as it tends to pile on baby fat around the neck and throat.

You can make up a good fitting grain ration of bran, ground oats, and oil meal with some corn as the condition of the animal may require. Beet pulp and molasses are good additions if you can get them. Watering your animal with each feeding is a good practice, and teaching calves to drink from buckets instead of water cups is important.

Again, don't overfeed your heifer. A yearling heifer may be excused for carrying more flesh than a calf—it is natural for her to put on a little flesh after breeding—but it is still important to keep that openness and dairy character along with growth and development.

Blanketing and Brushing

The correctly fed calf will develop a glossy coat and silky hair. Light blanketing may be desirable to keep off the flies and make the hair lie down. However, it must be accompanied by brushing to keep the hide in good healthy condition. Less blanketing is done now than formerly was thought necessary. After you brush your heifer, it's a good idea to rub her with a turkish towel. There are disagreements on whether a heifer should be washed before show day or not. It is a good general practice if followed with extra blanketing until dry.

Foot Trimming

No animal can stand or walk correctly in a natural manner unless its feet are in proper condition. After you put your heifer in the stable it is necessary to trim the hoofs to get them in proper shape. Enough of the hoof should be pared off so that the animal stands flat on its foot without rocking on its heel. A farrier's knife, a pair of pincers, and a little finishing with a rasp will usually do the job.

Care of the Horns

There's no objection to an animal that is neatly dehorned, but if you want to keep the horns on, they should be trained properly for a more pleasing appearance. To get the horns in shape for the show, smooth them down with a fine rasp or file and finish them off with emery cloth and steel wool. There are a number of methods you can use to give them a good polish. A good one is to first shine the horns with glycerine, then follow with a paste of powdered tripoli mixed with olive oil. Each application of polish is followed by a vigorous shine with pieces of flannel and plenty of "elbow grease!"

Training and Exercise

Train your animal to lead as early as you can. The first time you put a halter on your calf, tie her up rather than try to lead her right away. That will give her a chance to get to know the meaning of the halter. The animal should learn to be led without fighting, to stop anytime desired, to be able to back up if necessary, to walk with its head in a proper position—held up but not too high—and to stop with the feet properly placed.

Every animal is a little different and its position when standing should bring out its best points with the hind feet neither too far forward nor stretched. Learn to know your calf and pose it in such a way that the strong points will be emphasized and the weak points minimized. You should have a leather halter for showing, and it is well to practice showing her with the leather halter before show time. Sometimes a chain under the jaw is desirable for more control, but generally a gentle calf fights less on a strap lead. Exercise is important and it is nice for the calf to run loose in a dry lot for awhile in the morning and evening—but don't turn her out in the hot sun!

Clipping

Calves for show ring should not be clipped all over the body. Clipping tends to make the hair coarse

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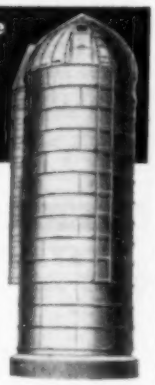

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and dull. If you handle the calf properly during the six- to eight-week period of fitting, she should have a short, glossy coat of hair. The most popular style of clipping a dairy calf takes a strip of hair off the nose, all from the face and ears and a strip on top of the neck. Clip the tail, beginning with the switch, and blend it smoothly at the tail setting. To make a smooth blend, a back stroke of the clipper is effective. On cows, the belly and udder should be clipped to show the milk veins to advantage but on younger animals, leaving the hair on the belly tends to add to the appearance of the depth of the body.

Show Day

Before taking your calf into the ring she should have the proper fill so that she will show as naturally as possible. Sometimes this is overdone by watering too heavily immediately before going into the show ring. By feeding a little salt the night before and watering a few hours before showing, followed by a little feed and beet pulp and some good hay, the calf should give a natural, well filled appearance without being overdone.

The tail should be washed clean and combed out to a fluffy appearance. If you're not rushed for time, the switch can be braided the night before and combed out just before you go into the ring.

Brush your animal with a fine brush before you go into the ring. A rub with a turkish towel, containing a little olive oil and a hand massage, will also help you give the animal a neat, glossy appearance.

Remember this — the showing starts immediately on entering the ring and does not stop until the show ring is left behind! Keep an eye on the judge, but also know exactly what you are doing to your animal. The ideal way to know an animal in the ring is to have it looking its best at all times without display of any special effort on your part to make it appear that way. Sometimes the judge is looking when you least expect it and may catch your animal in poor condition. Don't let your calf go to sleep!

Courtesy and Sportsmanship

Some judges place more emphasis on certain things than others. Therefore not all judges see all animals exactly alike. However, the judges selected by fair associations are carefully picked for their integrity and their knowledge. If you don't win—be a gracious loser. "To win without boasting—to lose without squealing," should be your motto. Most judges like to give reasons for their placings and will help you with suggestions to improve the fitting and showing of your animals, also point out the strong and weak points of your calf.

Here's a parting thought — it's well to remember that there are no certain "definite rules" to follow in fitting and showing dairy animals. The methods discussed in this article are the result of years of experience, contact with others, trial and error—and they have proved successful. There is much for all of us to learn on this subject. In fitting a young dairy animal, growing it out and finishing it for the show ring, nothing should be done that will in any way work contrary to its future usefulness. If you handle the job correctly, the fitting and showing of a good dairy heifer can help it develop into a better dairy cow.

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Brown Swiss—Thurs., Fri., October 12-13
Holstein—Thurs., Fri., October 12-13
Milking Shorthorn—Fri., Sat., October 13-14

Write today for full information and details for exhibiting or attending to: International Dairy Exposition, Inc., 130 East Washington Street, Indianapolis 4, Indiana.

THE WORLD'S FAIR OF THE DAIRY INDUSTRY
Oct. 7-14

2nd Annual
INTERNATIONAL
DAIRY EXPOSITION
INDIANA STATE FAIRGROUNDS Indianapolis
AYRSHIRE • BROWN SWISS • GUERNSEY • HOLSTEIN
JERSEY • RED POLL • MILKING SHORTHORN

Cattle Cannot Stand Extreme Heat

(Continued from page 525)

of the experiment, while temperatures were being changed so frequently, determinations were made twice daily.

It was found that the drop in milk yield with increasing temperature begins at about 80° for the Holsteins and about 85° for the Jerseys. The decline in milk production was more abrupt for the Holsteins than for the Jerseys.

As the temperature increased, the Holsteins also showed a more abrupt decline in feed consumption. The feed consumed and milk produced followed the same pattern—both declining as temperature increased.

It is believed that the greater sensitivity of the Holstein cattle to higher temperatures is due not to breed as such, but to their greater weights. Heat dissipation is by way of body surface, and since the amount of surface per pound of body weight decreases with increasing body weight, the rate of heat dissipation must slow down accordingly.

Difference Among Breeds

There were also individual differences in sensitiveness within the breed of animals of the same weight. This was probably due to better heat regulating mechanism within certain cows which enabled them to maintain constant body temperature in the face of increasing climatic temperature.

Milk production in high producing animals virtually doubles heat production. Hence, in an attempt to maintain constant body temperature by reducing production of internal heat when environmental temperature is increased, the complicated mechanisms of the cow's body dictate the lower milk yield. Loss of appetite at high temperatures may be another cause for the lowering of milk production.

Feed consumption increases heat production also. Hence, "physiological wisdom" dictates a reduction in feed consumption to offset rising climatic temperature.

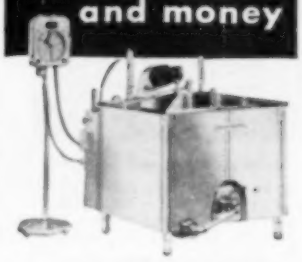
Accompanied by the decline in milk yield and feed intake was a rise in milk fat percentage. It is believed that this increase in fat percentage is more intimately related to the decline in milk yield than it is with the increasing temperature.

It is noteworthy that when the temperature of the control room was increased to 100° toward the end of the test that the two pregnant Holsteins in that group *simultaneously* aborted their unborn calves of 4½ and 6 months.

The critical temperature was, other conditions constant, 75 to 80° for Holsteins and 80 to 85° for Jerseys. Increasing temperatures above these levels rapidly depressed the feed intake and milk yield until at 105° both virtually stopped. On reducing the temperature to the control level (50 to 60°) the feed intake and milk yield promptly returned to normal.

Keep your cows cool during hot weather and enjoy the profits from their higher production!

save milk, man-hours and money



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With the Cherry-Burrell Spray F Pasteurizer and exclusive Sentinel Control even the smallest plant can pasteurize to the most rigid standards—can achieve the cream layer, natural flavor, good body color, and low bacteria count so desirable.

The Spray F Pasteurizer is a *complete pasteurizer* — water and milk pumps, water piping and conduit are built in. It has several desirable and patented features. Sentinel Control automatically controls heating water temperature to prevent heated flavors. Send for copy of the Spray F Bulletin or ask your Cherry-Burrell representative.

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You've always wanted a **Front Mounted Mower** and now it's here. Never before has mounting and mowing been so fast and easy. All points of wear are **Standard IH parts** including bar sickle and pitman. A thousand satisfied users will tell you the KOSCH FRONT MOUNTED MOWER is the Best. Learn why it's Best for you. Available for **Farmall, John Deere, Allis Chalmers, Co-op** and **other** make tractors. Get all the facts. Specify make and model of tractor. Write for FREE literature today.
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COMPLETE SYSTEMS
Write for details, prices, FREE folder
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LINK MFG. CO. FARGO, NORTH DAKOTA

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Safe secure tethering for all stock animals. No tangling or wrapping around posts or stakes. Ball and socket are flush with sod, animals can't pull it out. Moved easily to new pastures and exercise areas. Only $5.95 ppd. with money back guarantee. Postcard brings leaflet. Box 429.
KLARWIN FARMS, Nottingham, Pa.

Low Cost Feed—High Nutrition with a KOROK SILO

According to U.S.D.A., there's more feed material per acre from corn as silage than from any other crop. Tops for all crops, the extra-reinforced Korok Silo will even handle hay silage with ease. Cut your feed cost—write for our free Silage Facts booklet.

INDEPENDENT SILO CO.
768 Vandalia St. - St. Paul 4, Minn.

SPECIAL OPPORTUNITIES

— Where Buyer and Seller Meet —

The rate for advertising in this department is 30 cents per word per insertion, except for "help wanted" and "positions wanted" advertising which is only 20 cents per word per insertion. Count address. "J. W. Foley, Route 13, Green Bay, Minnesota," is considered as eight words. Blind advertisements must be signed: "BOX #, care Hoard's Dairyman, Fort Atkinson, Wisconsin" and count as 8 additional words. Count each initial or group of figures as a word. SEND CASH OR CHECK WITH ORDER. Copy must reach us four weeks ahead of date of issue. NEW ADVERTISERS MUST FURNISH REFERENCES. Send order to HOARD'S DAIRYMAN, Fort Atkinson, Wisconsin.

DAIRY CATTLE

FOR Sale—100 head open and bred Holstein and Guernsey heifers. Can furnish springer cows and heifers and small calves. Write or phone C. A. PAULSON AND SON, Neilsville, Wisconsin. 10-*

PIPER Bros. Farm—Purbeck and grade Holsteins, production, type, pedigrees and health. Let us quote you prices on quality Holsteins. Phone 2170, Watertown, Wisconsin. 3-*

REGISTERED Holstein calves. D. L. CAVEY, Elkhorn, Wisconsin. 11-*

KEATING Bros. Farm. Largest selection better Holstein and Guernsey. Bang's and TB tested, fresh and springing cows and first calf heifers in Wisconsin. Save time and expense. We ship on orders. TELEPHONE 414 Nights. Fort Atkinson, Wisconsin. 5-*

KENYON Brothers Farm serving the dairy farmer for forty years. Large selection of choice Holstein cows and first calf heifers, fresh and close springers, service bulls, T.B. and Bang's tested. In carload or truckload lots. KENYON BROTHERS CO., Elgin, Illinois. Phone Elgin 1818. 1-*

DAIRY Cattle—Large selection of choice Holstein and Guernsey springers and fresh cows. Top quality heifers of all ages. T.B. and Bang's tested. STANLEY BURNIDGE AND SON "Grand Hotel for Dairy Cattle," Elgin, Illinois. (Hotel Accommodations). Established in 1918. 7-*

HOLSTEINS, Registered, grades, one or carload. EDWARD SCHMIDT, Hutchinson, Minnesota. 13-6

ATTENTION dairymen and cattle dealers. We can furnish you Holstein heifers to freshen this fall. Cows of all breeds. Let us know your needs. We can supply them. BOTTEMA Farms, Bridgeport, Ind. Plainfield 8266. 20-*

CHOICE Holstein and Guernsey springing cows and heifers available for shipment at all times. Write or phone L. C. CHRISTENSEN CO., Abbotsford, Wisconsin. 11-6

CALVES—From the dairyland state. Registered Holstein, Guernsey, Brown Swiss heifer and bull calves. Registered and grade heifers and cows. Any quantity, any age. Low prices. Buy on approval. We ship C.O.D. J. M. McFARLAND & SON, Watertown 11, Wis. 13-12

GUERNSEY, Holstein and Jersey cows for sale. We handle nothing but top cows. Call or contact GEORGE T. DAVIS, Phone 3636, Crestview, Florida. 12-*

FOR Sale—Our entire herd of 38 high grade Guernseys. Including 18 milking cows, registered bull. Certified Bang's disease free herd. T.B. accredited area. JORGENSEN BROS., Box 263, Askov, Minnesota.

REGISTERED—Guernsey calves, K. V. FARM, Elkhorn, Wisconsin. 11-*

DAIRY Cows—Largest selection of high class dairy cows in Michigan. One or a carload, we have what you want. Unusually good selection of registered Holsteins of all ages at the present time. We can deliver cattle anywhere. MERLE H. GREEN & SONS, Elsie, Michigan. 5-*

DAIRYMEN! We can help you get choice quality dairy cows and heifers. Sold either on order, commission, or direct. Contact BILL GEURKINK or J. W. GEURKINK, Baldwin, Wisconsin. 7-*

BUY in Canada and save 10%. Ayrshires and Holsteins. PEARSON BROTHERS, Avonsyde Farms, Waterdown, Ontario. 7 miles from Hamilton, # 5 highway. 11-*

CATTLE MARKERS

DAISY Cattle Markers complete with chain, brass tag for horns and neck. Write for folder. GOLDEN ARROW FARMS, Dept. C, Huntington, Indiana. 16-*

DAIRY EQUIPMENT

REBUILT milking machines, all makes. Real bargains! MILKER EXCHANGE, Box 148-H, Mankato, Minnesota. 10-*

STOCKMEN'S SUPPLIES

ARTIFICIAL breeding equipment. Largest, most complete line. Everything from insemination tubes to professional inseminator's kits. Inseminators and farmers write for new free 64-page breeders catalog. NASCO, Fort Atkinson, Wisconsin. 7-*

HORN weights, 80c per pair postpaid. Made in 4 sizes ½ lb., 1 lb., 1½ lb., and 2 lbs. Tattoo markers $4.75 postpaid, includes set of numbers, bottle of ink, and full directions. We also carry complete line of ear tags, neck chains, veterinary instruments, supplies, serums, remedies, in fact, everything for the stockman. Write for free catalog. BREEDERS SUPPLY CO., Council Bluffs, Iowa. 18-*

DEWART with De-Wart-Em, veterinary wart remover. At your dealer or $1.00 postpaid. ONTARIO CHEMICAL COMPANY, Ontario, Oregon. 9-*

ARTIFICIAL insemination supplies and instruments. Technical information. Catalog on request. BREEDERS EQUIPMENT CO., Flourtown, Pennsylvania. 7-*

DAIRYMEN — "Suppl-E-ment" stops breeding failures! Four pounds, $6.40 postpaid. Guaranteed. Full information from MATHEWS SUPPLEMENTS, 20-C Riverside St., Rochester 15, N. Y. Also good opportunities for dealers and salesmen. Write today. 9-6

FREE—80 page Breeders Catalog. Most complete farmers catalog ever published. Write NASCO, Fort Atkinson, Wisconsin. 20-*

FARMS FOR SALE

WISCONSIN equipped farms for fall possession. All with electricity. Some modern conveniences. 80 acres $6,500; 106 acres $9,800; 154 acres $15,275; 160 acres $18,000; 160 acres $18,000, including personal property. Full information and photos upon request. BAKER ZZ12, St. Croix Falls, Wisconsin. 14-2

VIRGINIA farms, estates, tourist camps, service stations, city property, free catalog. ELLIOTT E. BROOKS Fredericksburg. 4-*

STROUT—Headquarters For Farms. Big Golden Anniversary Farm Catalog, 124 pages, 2850 bargains, 32 states, coast-to-coast. Mailed free. STROUT REALTY, 7 South Dearborn Street, Chicago 3, Illinois. 11-6

BUSINESS OPPORTUNITIES

SMALL milk plant for sale, in Missouri, approximately 500 gallons daily, two routes, pasteurizing plant, homogenizer, all in A 1 condition. BOX 557, care Hoard's Dairyman, Fort Atkinson, Wisconsin.

FARM EQUIPMENT

LIQUID manure pumps. We manufacture the Tillamook liquid manure pump and the flexible chain harrow. STEINBACH IRON WORKS, Tillamook, Oregon. 23-*

COW stalls, pens, steel windows, hay carriers, steel fence post, post pullers. Immediate shipments. STANDARD EQUIPMENT, INC., Bel Air, Maryland. 18-*

FREE barn plan book. Best ways to build or remodel your farm buildings. Send for details. LOUDEN, Dept. 5, Fairfield, Iowa. 1-*

SILOS—The swell lookin' "Ribstone" Silo always protects its contents whether corn or hay. Improves feeding results, saves money, adds property value to the farm. "Ribstone" is economical to buy; made by America's largest exclusive manufacturer of farm silos. Write today for free folder, pictures and prices. FARM SERVICE CO., 1227 Riverview, Kalamazoo, Michigan. 9-6

BLIZZARD silo fillers, also prompt repair parts service. BLIZZARD MFG. CO., Canton, O. 15-4

PREVENT leg swelling and foot trouble in your herd by spreading a half inch Unicrete floor over your old concrete. Used for years in many dairy barns. Your own men can easily do the work. Send for circular and prices. UNION PRODUCTS COMPANY, Ft. of West 70th Street, Cleveland 2, Ohio. 12-spl

MOTORS 1 horse $55, ¾ $24, ½ $15. Twin cylinder compressors $17.50. Fans 52 volt $5.75. BUTLER, 1685 Milwaukee, Chicago 47.

BARN Equipment—Modernize your barn with Simplex stalls, stanchions, pens, water bowls, elec. ventilation, etc. Write for catalog. SIMPLEX BARN EQUIPMENT, Marshfield, Wisconsin, Dept. A. 14-*

FEED BAGS

WE pay highest prices for your empty cotton and burlap feed bags. Write for our quotations. THE DAYTON BAG AND BURLAP COMPANY, Dayton, Ohio. 1-*

FERTILIZERS

RUHM'S PHOSPHATE rock pays you best. And it costs you less if you count the results. Ground finer by far than any other, it is quicker acting, achieves better distribution in the soil, so plants get more out of it—and so do you. Get the facts! Write for folder or name of nearest dealer. RUHM PHOSPHATE & CHEMICAL CO., 8 S. Michigan Ave., Chicago 3, Ill. 6-spl

POULTRY—BABY CHICKS—DUCKS

CAPONIZE chemically. No surgery, no slips. Requires no skill. Tenderizes, flavorizes all age poultry, amazing short period, 6 to 8 weeks. Write for free simple instructions. SCHLICHTMAN HATCHERY, Appleton City, Mo. 8-*

SWINE

PROMISING Minnesota No. 2 fall littered barow boars and gilts. Free leaflets BURTON LANE FARM, Box 552, Lake Forest, Illinois. 6-*

REGISTERED Berkshires. Sired by 3 State Fair Champions. Practically grade prices. ORLO ADAMS, Hartland, Wis. 24-*

REGISTERED Minnesota number 1 lean meat type hogs. HESPRICH FARMS, Lomira, Wisconsin. 14-3

DOGS

GENUINE English Shepherd and Collie Pups. Healthy and strong. Guaranted heelers. Year's trial. Choice of sex. Spayed females a specialty. Priced right. CLOVERDALE KENNEL FARM, Ackley, Iowa. 18-*

SHEPHERDS, Collies, outstanding heelers, watch dogs. ZIMMERMAN FARMS, Flanagan, Ill. 5-*

COLLIES—The kind that bring home the cows. Guaranteed to please you. Dept. H. BHOMONT KENNELS, Monticello, Iowa. 12-*

DECIDE on a registered Border Collie pup and tilt your mind toward my offerings. Don't overlook my many years of breeding and importing to produce the most intelligent dog to handle your livestock direct from my imported matings. M. S. PERROT, R-4, Gentleman Road, Ottawa, Illinois.

RABBITS

MAKE money—fast! Raise highly profitable Angora or New Zealand White rabbits. Good markets. Details free. WHITE'S RABBITRY, Newark 50, Ohio. 13-*

AGENTS WANTED

HAVE a limited number of territories still available for aggressive agents. Complete line of high quality barn equipment including electric ventilation at competitive prices. Earn $3,000 and more per year in your spare time. Write BOX 555, care Hoard's Dairyman, Fort Atkinson, Wisconsin. 14-5

POSITIONS WANTED

POSITION as Inseminator. College trained. BOX 554, care Hoard's Dairyman, Fort Atkinson, Wisconsin.

MANAGER, herdsman, married, age 39, 2 children ages 6 and 10, life dairy experience, top herds as herdsman and manager A. R. and DHIA records. High school and some university agricultural training. A-1 reference. BOX 556, care Hoard's Dairyman, Fort Atkinson, Wisconsin.

MARRIED man wants job in dairy, had 14 years experience. Can move any time. DELMER COBB, Ewington, Ohio.

HELP WANTED

DAIRYMAN—Single or married, unusual opportunity for man wanting permanent job working with high producing registered Holsteins. Chicago vicinity. Outline past experience. Write BOX 527, care Hoard's Dairyman, Fort Atkinson, Wisconsin. 10-*

EXPERIENCED Dairy Hands to work on large Certified Milk Farm. Wages $56.96 to $48.00 per 48 hour week. Pay for overtime. Room and board $1.85 per day. Opportunities for dependable men. Write for information. WALKER-GORDON LABORATORY COMPANY, Plainsboro, New Jersey. 18-spl

WANTED—Experienced dairyman, single, to manage herd of 50 cows on modern 500 acre farm. Finest equipment—Surge milkers, milking parlors, every convenience. $150 month plus room, board, laundry. R. C. BUBOLZ, Manteno, Ill.

SINGLE man experienced for general farming and dairy. Please furnish references. ERICH BURGER, Route 2, Dwight, Illinois.

WORKING foreman, married, for dairy and diversified farming, 400 acre modern, southern Wisconsin. Must be experienced, capable taking complete charge. Give full particulars, first letter. BOX 555, care Hoard's Dairyman, Fort Atkinson, Wis. 14-2

YOUNG man wanted to learn all phases of hide business in a large Milwaukee tannery. Eventually will take charge of hide processing department in tannery. Address replies with full details of age and work background to Personnel Department, ALBERT TROSTEL & SONS COMPANY, Milwaukee, Wis. 14-2

DAIRYMAN, single, to live with owner and care for herd of registered Holsteins. Prefer man between 19 and 25 years old. 60 hour work week. Living expenses furnished. Wages $150 a month, based on milk check. Vicinity of Flint, Michigan. Write qualifications to BOX 558, care Hoard's Dairyman, Fort Atkinson, Wisconsin.

FILM SERVICE

8 GIANT "Bondtone" enlargements from your roll or negatives 25c (special offer). 16—50c. BOND STUDIOS, Box 1735H, Cleveland 5, Ohio. 9-*

LOW cost vacation special! Roll developed, 8 giant (enlarged) prints only 35c; 12 or 16 for only 50c. 8 giant reprints 32c. Quick service. Valuable premium coupon. Free mailers. WILLARD STUDIOS, Box 5536W, Cleveland, Ohio. 14-*

MISCELLANEOUS

FOUND! Over 100 ways to make extra money and friends. Sell metallic Christmas cards, wrappings, children's books, gifts. Big profits. Bonus. Request feature samples on approval, free samples name imprinted Christmas cards, stationery, napkins, free catalog and free selling guide. NEW ENGLAND ART PUBLISHERS, North Abington 253, Massachusetts.

PARTS for all stoves, ranges, heaters, furnaces back to 1886. Fit guaranteed. Write for prices. Give make, model and part number. BLUE BELLE CO., Dept. Y 1507 Howard, Omaha, Nebraska. 6-spl

MAKE up to $35-$45 week as a Trained Practical Nurse. Learn quickly at home. Booklet free. CHICAGO SCHOOL OF NURSING, Dept. P-7, Chicago, Illinois. 13-6

SHAVINGS—Baled, carload lots, for bedding of livestock, poultry litter. Write P. BRENNAN CO., 543 S. Dearborn, Chicago, Ill. 13-4

RUPTURED? Positive comfort, no understrap, no steel, no elastic. Write SMITH MANUFACTURING CO., Preston, Ontario. 13-6

WOMEN earn money at home. Sew our ready cut "Rap-A-Round." Easy—profitable. HOLLYWOOD MANUFACTURING COMPANY, Dept. H-7, Hollywood 46, California.

A $100-A-MONTH hobby at home! No soliciting, no mail order, no meeting people. Easy, enjoyable pastime. Details 25c. (Refundable) LAURA DICKSON, 1006-HD Elizabeth St., Anderson, South Carolina.

NEED stationery? You will like our livestock illustrations. We will print your order with your own breed on it. Write for stationery circular. HOARD'S DAIRYMAN, Fort Atkinson, Wisconsin. 20-*

AT Last! Something new and sensational in Christmas cards. Show gorgeous satins, velours and metallics never before offered. Gets easy orders fast. Pays up to 100% cash profit. Free samples of 50 Christmas cards with name, 50 for $1.00 up. 80 assortments. Personalized book matches and stationery, gift items. Two assortments on approval. Write PURO CO., 2801 Locust, Dept. 092-J, St. Louis, Missouri. 13-4

Calf Housing Survey

After visiting 115 dairy farms in the state of Washington, R. E. Erb and N. S. Lundquist set forth 12 recommendations for raising dairy calves. Seventy of the herds surveyed were located in Western Washington; 39 in the irrigated sections and six in the dry land areas of the state. These 115 herds averaged 36 cows per herd and showed an annual replacement rate of 34.13 per cent.

Of the 115 farms visited, 70 had stanchion barns, 39 had loafing barns, and three had no provisions for housing; 42 had milking barns and nine had milking parlors. On the remainder, cows were milked in the stanchion barns. Seventy-nine per cent of the total listed dairying as the only enterprise and the remainder reported having additional sources of income. Here are the 12 recommendations laid down by the Washington State College investigators:

1. Always provide maternity stalls in bad weather.
2. Never allow cows to freshen in the stanchion.
3. Be sure the calf receives its mother's milk for a minimum of three days.
4. Keep calves in individual pens during the milk feeding period.
5. Construct pens so they can be thoroughly cleaned and disinfected.
6. Avoid drafts.
7. Keep the air moving to avoid odors and condensation.
8. Keep calves and bedding dry.
9. Do not overfeed.
10. Use clean feeding equipment.
11. Develop a regular feeding routine.
12. Feed some grain until one year of age.

Records Reported

In the first three months of this year 133,347 lactation records were reported in the Bureau of Dairy Industry for use in proving DHIA sires. This is approximately 40,000 more than were reported in the first quarter of 1949, the previous peak.

New York led the states in number of records reported, with a total of 22,209 records. Wisconsin was second with 19,561, and Pennsylvania third with 12,975.

Of greater importance, however, is the fact that Wisconsin reported 23.5 per cent of the total number of cows on test. Among the major dairy states, Wisconsin forged ahead of former reporting leaders such as Minnesota, West Virginia, and Pennsylvania. Delaware led the entire list with 28.3 per cent. Its volume of records reported was 647 as compared to Wisconsin's 19,561, however.

Second Crop Ruined

One of my DHIA members had his second crop of alfalfa hay ruined by rains. To get this material out of the way of the new crop, he pulled the manure spreader behind his field hay chopper. In this way the chopped material was spread evenly over the field. The soil nutrients which had been taken from the soil by this crop were returned.—JOHN MONTGOMERY, Mason Co., Illinois, DHIA.

YORKSHIRE

The Champion Bacon Hog of the World

Spring and Fall Boars and Gilts
Open and Bred for Delivery
Also a Few Choice Youngsters

BANCROFT ACRES

9466 Miller Road, Swartz Creek, Michigan

National DAIRY CATTLE CONGRESS

The Industry's Greatest !

National in Scope—In 1949 every state in the United States, plus Canada, had entries in some department of this internationally famous exposition. Begin making plans today to attend the National Dairy Cattle Congress this year. See the champions of all the State Fairs compete for national honors. See the multi-million dollar farm machinery display, recognized as the mid-west's greatest.

Extensive Plans—The 38th Annual Exposition promises to be the greatest and grandest ever staged. Premiums have been increased in all dairy cattle breeds, the span of the show lengthened to eight full days to accommodate the increasing number of national events and a grounds improvement program undertaken.

Season's Climax—This is the climax show of the entire season. National titles are won and lost during this great exposition. National judging honors will be awarded to college men and Future Farmers of America and 4-H boys. It's a week of excitement for every dairy farmer. Write today for information.

The Climax of the Show Season

SEPT. 30-OCT. 7 WATERLOO IOWA

LEARN AUCTIONEERING

America's leading Auctioneers teach you. Students sell actual sales during term. Our graduates are successful. Earn large income. Term soon. FREE catalog.
REISCH AUCTION SCHOOL, Mason City, Ia.

More **PROFITS** because

Jerseys Are High Producers

A 104 cow herd in New England last year averaged 11,703 pounds milk and 616 pounds of fat on a twice daily milking schedule. For 10 years it has averaged over 538 pounds fat per cow.

The American Jersey Cattle Club
Columbus 15, Ohio

BRIGHAM FARM JERSEYS

BREEDING GREAT PRODUCERS IS OUR BUSINESS
Our Latest Herd Average
104 Cows : 11,703 milk, 616 fat
Write For Bull List

St. Albans, Brigham Farm Vermont
Established 1803
ELBERT S. BRIGHAM, Owner

HEAVEN HILL JERSEYS

HERD CLASSIFICATION
46 Head - 89.22%
22 Excellents, 3 Excellent Herd Sires.
We've got a character Bull for you.
Write Today

Heaven Hill Farm
Box HD Lake Placid, New York

Champion Production Jerseys

Gold Star Herd. Winning in succession Highest Production Awards State of Georgia over all breeds. Choice bulls and heifers from cows 9,000 to 12,000 lbs. milk, 400 to 700 lbs. fat. Milked Twice Daily. **HARRIS PEDIGREE FARM**, Box HD, Pelham, Georgia.

TWO JERSEY BULLS FOR SALE

We offer for sale a Four Star six year old herd sire, Royal Standard Surprise, by Right Royal Standard Imp., a son of Right Royal. Dam is Biltmore S. Surprise. His daughters have good type and the first four to freshen are doing well in our herd.
We also offer a bull calf, born 2-28-50. His sire, Brampton B. R. Glory, a grandson of Brampton Lady Basilua. His dam, Laddies Dreaming Doll with 828.92 lbs. milk 5.82%, 470.2 lbs. fat as a four year old.
Both bulls priced to sell. Write for complete information today, or better still, come and see them and the daughters of the herd sire.
RICHARD HALLSTROM
Box 467 Waukesha, Wisconsin

PIXY FARM offers

a December 5-star bull calf. Sire and dam each "Very Good." Three nearest sires each a "Superior" sire. 3 nearest dams average 607 lbs. fat, 305-2x ME basis. **CHARLES S. KELLY-DAVID KELLY**, Hudson, Wis.

Jersey Bulls For Sale

By Proved Sire - From Good Record Dams
We offer sons and grandsons of GOLDEN DREAMER, a proved sire whose first 21 daughters average 519 lbs. fat, and from classified (Herd av. 87% +) cows with official 2X records of 500 to 800 lbs. of fat. Write for further information and for a copy of our free Golden Dreamer booklet.
BENDALE FARMS
401 W. Town Street Columbus 8, Ohio

PRODUCTION BRED JERSEYS

Increase your production by using a son of Brampton W. B. Lord Clair, Five-Star Son of Brampton World's Records and out of Brampton Lord Clairvol 928 lb. B.F. in 365 days 2X.
3 year Herd Ave. 510 Classification Ave. 87.19%
PLEASANT VIEW JERSEY FARM
CRAWFORDSVILLE, IOWA

BRYN MAWR FARM

Offers two fall bull calves. Both out of dams over 3,000 pounds of butterfat and still going strong. If interested in **PRODUCTION** write for pedigree and details. **FRANK B. ASTROTH**, Rt. 1, South St. Paul, Minnesota.

REGISTERED JERSEY BULL CALF

DROPPED MARCH 1, 1950
Sire: Brampton W. B. Lord Clair—Cl. V. G. A 5 star son of Brampton World's Records, out of B. Lord's Clairvol, 928 lbs. B.F. in 365 days 2x. **Dam:** Wonderful Aim X Sultana Cl. V. G. at 2 yrs. 518 lbs. B.F. in 305 days M. E. at 3 yrs. of age 2x. Both granddams of this calf are "Ton of Gold" cows and have an average production of 871 lbs. B.F. 365 days 2x actual.
PLEASANT VIEW JERSEY FARM
Crawfordsville Iowa

GOLDEN SUNSET JERSEYS

Forty young registered Jersey bulls and bull calves at lower prices for the next sixty days, than we have made in several years. Biltmore and Imported breeding. Send for free list. **ENNIS STOCK and DAIRY FARM**, Festus, Missouri.

DAIRY COWS, HEIFERS

100 Jersey and Guernsey Springer Cows. All TB-abortion tested. Special attention to order buying. **W. L. BUSH, Springfield, Mo. Phone 906, Night Phone 151, Rogersville, Mo.**

INCREASE YOUR MILK PROFITS WITH **BROWN SWISS**

World's largest producers of 4% milk. Cows weigh 1500 lbs. and up. Long milking lifetime. High salvage value. Free literature and breeders lists.
BROWN SWISS ASS'N., Beloit, Wis.

ILLINOIS BROWN SWISS DISPERSAL

Complete Dispersal of the Innisfail Herd of Registered Swiss Owned by T. G. Seaton and E. L. O'Brien, Jr.

MONDAY, JULY 31, 1950

12:30 p. m. Daylight Time under cover at the farm near

WOODSTOCK, ILL.

55 HEAD - 50 Females, 5 Bulls

T. B. Accredited — Bang's Tested

Herd built on the program of testing for production and classifying for type. Many records over 500 lbs. of fat. Several cows classified "Very Good."

Write At Once For Catalog
NORMAN E. MAGNUSSEN
Brown Swiss Sales Service
LAKE MILLS, WISCONSIN

96 Reg. BROWN SWISS

AT PUBLIC AUCTION
FRIDAY, AUGUST 4th
Promptly at 11:00 EDT
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The Sleepy Valley Farms herd owned by A. M. Kelton & Son to be completely dispersed under cover at the farm 1½ mi. north of Saxtons River, or 6 miles west of Bellows Falls. 48 cows who are daughters of such famous bulls as: Privet's Royal of L. H., Violet's Tarsus of Vernon, Walhalla Jester Baron. 40 calves, bred and open heifers. 8 bulls.

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AUGUSTA NEW JERSEY

FOR SALE

BULL - Born Jan., 1950

Grandson of Royal Lenda 20508M 1109F World Record Jr4 and Douglaston Lady Augusta, Excellent. 4 Excellent daughters, 5 daughters average 722F. Dam made 15819M 850F Sr3 and is full sister to Peerless Lenda 13537M 762F World Record Sr3 305C. His 3 nearest dams average 855F in immature classes. Also a few choice heifers.

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Head your herd with a Foremost bull that is backed by generations of the breed's best bloodlines—a bull that is linebred for both type and high production. We always have for sale some very desirable young bulls. Write us or better still come to the farm before you buy your next herd sire.

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Hopewell Jct. (Duchess County), New York
J. C. Penney, Pres. W. K. Hepburn, Mgr.

REAL HERD IMPROVER

ROCKINGHAM FORECAST—born June 10, 1949. His seven nearest dams average 670 lbs. fat. Sire—Rockingham Peerlight, he traces 12 times to Langwater Holliston the sire of "Levity." Dam—Rockingham Prens, she traces 15 times to Langwater Holliston, she has a record of 11161-561-Jr2C. Here is good type and production. Write for details and prices.
D. G. Tenney, Owner Salem, New Hampshire
ROCKINGHAM FARM

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FRITZLYN FLASHMAN, dropped 9/5/49
Sired by Fritzlyn Flash. Grandson of Caumsett Flashlight who just had a daughter finish with 731 lbs. of fat in Jr. 2. Dam: Fritzlyn King's Roseate. This son is a double grandson of Antietam Gypsy King who sired Fritzlyn King's Jeanette that will finish with 19,200 lbs. of milk and 860 lbs. of fat sold for $6000.
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J. H. Rustman, Owner Roy Seitz, Manager

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Purebred and grades with outstanding production and type. Purebred bulls that will increase the value of your herds. T.B. and Bang's tested. Service to buyers is free. **JEFFERSON CO. GUERNSEY BREEDERS' ASSN., Fort Atkinson, Wis.**

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4% MILK
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AYRSHIRE BULL CALF

Born June 16, 1950. Sire approved for production and type. 12 dams ave. 10,818# M. 4%, 434# F. (2x M.E.) Dam's record just completed at 5 yrs., 12,569# M. 4.4%, 554# F. 2x, 305-day. Type "V.G." Price $400. Pedigree on request.
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FUTURE HERD SIRES
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We Offer a Son of Carnation Ensign From a Young 4% Daughter of Governor

THIS week we offer a handsome young bull, Ear Tag 8751, born February 11, 1950, whose six nearest yearly tested dams average 978 lbs. of fat. The sire of this calf is a son of Carnation Chieftain from a 1066 lb. daughter of Governor of Carnation. The dam of Ear Tag 8751, a daughter of Governor of Carnation, is a heifer with 650 lbs. of fat as a 2-year-old on 3-time milking.

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2 TOP NOTCH BULL CALVES 2

Born in February 1949. Both by Pabst Embel Wayne, 4% proven sire, whose A.R. daughters are making exceptional records and testing from 3.7 to 4.1%. No. 1 Dam, Lashbrook Leah Ormsby (V.G.), 557 lbs. fat in 305 days, 3.7%. Nine nearest dams ave. 4% test. No. 2 Dam, Lashbrook Patricia Ormsby, 452 lbs. fat, 305 days, 3.7% test. Both extra good individuals, priced $500 and $500 respectively. Send for pedigrees and photos.

A. J. LASHBROOK Northfield, Minnesota
(Accredited and Certified Herd)

---

6 "CHIP" BULLS FOR SALE

We are offering for sale six very good young bulls sired by our twice All-American sire, Franlo Chip Grand Monarch. Two are ready for service, the others soon will be. All are good individuals. All are out of cows with good production records. If you need a good young sire, write us today. We are sure one of these will please you.

ZELDENRUST FARMS
6411 E. Minnesota Street Indianapolis, Ind.

SERVICE AGE BULL BORN 5-21-49

A double grandson of Pooch Ormsby Fobes Eden out of a 559 lb. 5 year old on 2X. This bull will stand out when compared for type. His dam is one of our best dairy cows and his sire a prize winning two year old. He is ready to work for you and priced reasonable. **Write for photo and pedigree today.**

MEDSKER FARMS Sullivan, Indiana

OUTSTANDING YOUNG BULL

FOR SALE, born Sept. 8, 1949. Sire: Nellwood King Hartog Homestead No. 998194. Dam: daughter of Oakendale Ty Vic, record as 2 year old, 202 days 8840 lbs. milk, 377.6 fat, 4.27%. Grand Dam last month, 130 lbs. fat at 4.9%. Price, $450. Also a few bred heifers.

PLUM GROVE FARM Palatine, Illinois

READY FOR SERVICE

E. T. 367: A handsome calf. Maternal grandson of Rawleigh Della B Buttercup. Fat. 365d 6½y. 1,038.50. Milk 3X 30,402. Sire a paternal grandson of Carnation Inka Hazelwood Walker 365d 5½y Fat 1,032.10. Milk 27,181.
Born July 22, 1949. About 55% black. Well marked. Beautiful calf. Moderately priced. Write for information.

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QUALITY BULL OFFERING

A Sept. and a Nov. calf sired by our Black Beauty bull and our Carnation bred dams. One or two younger ones sired by our Carnation Majestic. Our dams all sired by Carnation bulls, some several crosses of Carnation. Inspection invited.

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HIGH TEST!!!

FEB. CALF . . . 3 nearest sires all plus proven.

His Sir Boss Ormsby Fobes bred sire:
Increased fat 145 lbs., test .2%, milk 2,973 lbs. 6 HT daughters ave.: 509 fat, 4.05%, 2x, 305 days. Dam's 6-2x records ave.: 538.9 fat, 3.8%. Maternal sisters with 850 fat, 4.1% (3x) and 576 fat, 3.8%, (2x). 16 HT paternal sisters ave. 450 fat, 4.06%, 2x, 305 days.

His Admiral Ormsby Fobes bred dam:
HT 454.5 fat, 3.9%, 2x, 334 days. HT daughter 503.5 fat, 4.2%, 2x, 352 days. 20 sisters (1st 52 records) ave.: 500 fat, 3.8%. Dam with 473 fat, 4.0%, 2x, 305 days, 4 yrs.

HE CAN BE BOUGHT FROM
SCOTT MEYER & SONS Hannibal, Mo.

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4 YEAR OLD SIRE FROM A 4% DAM FOR SALE

Proven Carnation Breeding on his sire's side. Proven production on his dam's side. His dam has almost 700 lbs. fat on 2X.

FOOTHILLS HOLSTEIN FARM, Papillion, Nebr.

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With the best of foundation stock and over 25 years of Burke and Ormsby linebreeding, with complete herd production records kept in every herd, and combining production and type by careful selection in our breeding program, we have been able to obtain outstanding results. We invite you to visit our herds. If interested in a good young sire, write for our bull list.

W. W. KINYON, Farm Supervisor
STATE DEPT. OF PUBLIC WELFARE—
STATE CAPITOL
Madison, Wisconsin

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Services - W. L. Baird - Arthur Bennett - Harvey Swartz - Ed Weyker - Frank Swartz - Don Stouffer at your disposition—can handle orders for truck or carloads. Telephone 3644, Waukesha, Wis., or write for information to

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Waukesha, Wis.

DANE COUNTY HOLSTEIN BREEDERS ASSOCIATION

Offers special sales service on grade and purebred cattle from one of Wisconsin's largest dairy counties where over 10,000 cattle are on DHIA test and more than 15,000 are bred artificially.

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353 W. Johnson St., Madison, Wisconsin
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HOLSTEIN-FRIESIAN ASSOCIATION
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Brattleboro, Vermont

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Arthur H. Weiner, Secretary-Fieldman,
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If in need of good dairy cows, selected from Wisconsin's oldest and most thirkly populated Holstein territory, write FRANCIS DARCEY.

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Pabst Regal "Excellent" Gold Medal Proven Sire

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Wisconsin Admiral Burke Lad's (V.G.) transmission of high production is inherited by his sons. Pabst Roamer (Ex.) and Pabst Regal (Ex.), as shown by these averages of their daughters—Burke's 64 daughters average: at 2 yrs. 4 mos. 17,094 m. 3.67% 625.2 f. 3X. Pabst Roamer's 40 daughters ave.: at 2 yrs. 4 mos. 17,859 m. 3.7% 661.9 f. 3X. Pabst Regal's 14 daughters ave.: at 2 yrs. 3 mos. 17,986 m. 3.77% 676.7 f. 3X.

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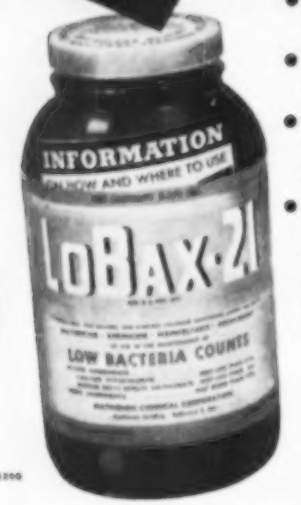

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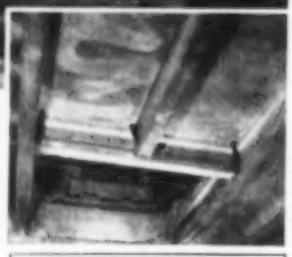

AFTER a raging fire in 1918 gutted the barn on the Norris farm near Mukwonago, Wis., it was rebuilt with reinforced concrete first floor walls and a concrete joist haymow floor.

In 1919 and in 1949 this concrete construction saved registered Holstein herds from destruction when the barn superstructure burned. The concrete still is structurally sound and serviceable (see photo of mow floor at right).

Whatever you plan to build remember *concrete can't burn!* It's also stormproof, decay-proof, termite-proof and ratproof. That's why concrete construction is a wise farm investment.

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Sterlingold Dispersal Averages $6,563

New Record for Purebreds

All previous records were broken at the recent Sterlingold dispersal, Stamford, Conn., when 62 registered Guernseys sold for $406,900 to thirty buyers, establishing a new all-time high average for purebred cattle sales, $6,563. Some 2,000 amazed spectators from every section of the nation saw record prices paid for a dairy bull, cow, bred heifer, and open heifer. Sterling Farms, Inc., was founded eight years ago by Mr. S. H. Golding, and Bob Kinross has managed the farm almost since its inception.

The very first animal in the sale, 10-year-old Coronation Melinda, Excellent, was started at $10,000 and a number of folks kept right on bidding with rapidity until the final gavel sold her to Fairlawn Farms Co., New York, for $31,000, with C. G. Raible, Ohio, the contending bidder.

Even more spectacular was the sale of "Melinda's" 3-year-old son, Sterlingold Melinda's Majesty, that brought a record high figure of $46,000, purchased by A. L. Kaskel, Connecticut, with Abbotts Dairies, New Jersey, the contending bidder.

Even though many thought the top had been reached, the thirteenth animal to enter the ring, and incidentally the stablemate of "Majesty," surpassed all previous figures in dairy cattle sales when Frasier W. McCann, Connecticut, made the final bid of $50,000, with North Farm, Rhode Island, the contending bidder. This 4-year-old sire, Gardenville Rose King, is the son of Pine Manor Courtesy, that previously was the second highest Guernsey cow ever sold at auction at $20,000, and in the Sterlingold dispersal sold to Fairlawn Farms for $28,000, just $3,000 under the record high paid for Coronation Melinda.

The top open heifer of the sale, and one that established a new all-time high, was a daughter of Pine Manor Courtesy and the $46,000 bull "Majesty." This very nice individual, Sterlingold Lady Cora, also was purchased by Fairlawn Farms for $21,000. The same buyer paid a record price for a bred heifer, Sterlingold Memento, that brought $15,000.

Fairlawn Farms was the top buyer in the sale, purchasing five head for $105,000. The first 40 head sold brought an average of $8,425, and just three head brought less than $1,000.

The sale was managed by The Pate Sales Company and The Louis McL. Merryman & Sons, Inc., with Harry Pate and Louis McL. Merryman, Sr., making the announcements from the box. E. M. Granger, Jr., was the auctioneer, assisted by Louis McL. Merryman, Jr., and John B. Merryman.

Following is a list of those animals selling for $10,000 or more, with the buyers' names:

Frasier W. McCann, Connecticut	
Gardenville Rose King	$50,000
A. L. Kaskel, Connecticut	
Sterlingold Melinda's Majesty	$46,000
Sterlingold Lady Dinah	10,100
Fairlawn Farms Co., New York	
Coronation Melinda	$31,000
Pine Manor Courtesy	28,000
Sterlingold Lady Cora	21,000
Sterlingold Memento	15,000
Pine Manor Crown Jewel	10,000
F. T. Bedford, Connecticut	
Sterlingold Molly	$18,000
John W. Hanes, New York	
Sterlingold Valorie	$10,000
Pine Manor King's Divine	10,000
A. D. Pinkham, Vermont	
Foremost Perfect Lady	$10,000

Some workers are fired with ambition—others for lack of it.

Active Digestion Full Assimilation Depend upon TRACE MINERALS

Dairy cows, like all livestock, make better use of their feed, give more milk, if they get the salt and trace minerals they need. The chlorine of salt is needed to digest protein . . . the sodium for the fats and carbohydrates. Trace minerals — iron, copper, cobalt, manganese, and iodine — control the enzyme, vitamin, and hormone functions that build feed nutrients into blood, bone, tissue, and milk. Don't take chances. Feed Morton's Free Choice Trace Mineralized Salt to all livestock.

FREE FOLDER For important information on feeding salt and trace minerals, write Morton Salt Co., P. O. Box 781, Chicago 90, Illinois.

MORTON'S Free Choice TRACE MINERALIZED SALT

Contains iron, copper, cobalt, manganese & iodine

IRRIGATION easy as ABC!

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PUSH, CLICK! IT'S ENGAGED! Water pressure automatically seals the connection. A TWIST, A PULL! IT'S APART! Saves steps, eliminates latching and unlatching.

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3905 E. BROADWAY, TAMPA, FLA.
SEND FOR FREE FOLDER

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Be safe! Use Dr. LeGear's new Fly Spray. Does not contain DDT. Kills and protects against Stable Flies, Horn Flies, Horse Flies, Deer Flies, Mosquitoes, and Gnats. Economical, too.

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HOOF ROT?
CANKER—THRUSH
A powerful antiseptic for stubborn hoof conditions, fungus infections. Easy to apply—pour it on. Big 12 oz. bottle—$1.00 at your dealer's, or mailed postpaid. H. W. NAYLOR CO., Mineola 11, N. Y.

Dr. Naylor's LINITE

Veterinary Column

J. W. BAILEY, D.V.M.

Pinkeye

The most striking symptom is a watery discharge from affected eyes. Swelling is common and severe attacks may cause ulceration and even rupture of the eyeball. Diseased eyes generally become covered with a milky-colored film which may or may not disappear after recovery from an attack. Affected animals sometimes go completely crazy with pain, especially if exposed to direct sunlight. This is not to be wondered at, since the diseased eyes are extremely sensitive to glare. Feed is generally refused entirely, suffering animals grow thin, and milk production drops off to practically nothing. Many cattle are left permanently blind in one or both eyes by an attack of pinkeye, though the disease causes few deaths.

Cause

While still disputed, the cause is generally believed to be a germ called Hemophilus bovis. Pinkeye is highly contagious and spreads rapidly through a herd when once started. Animals are not immune after one attack but never seem to be so severely affected in later outbreaks. It is believed that these recovered cattle often serve as carriers of the disease. The trouble is commonest in cattle on pasture and is seldom seen during the winter months. The means of spread is not definitely known but flies are often suspected of being involved. At least they feed on discharges from affected eyes and then fly to those of healthy animals, so they must be considered as possibilities along this line.

Diagnosis

Diagnosis is usually based on the symptoms, season of the year, and evidence of being highly contagious. An oat hull or dirt particle in the eye may give similar symptoms, but shows no tendency to spread through an entire herd like pinkeye.

Treatment

Affected animals should immediately be separated from the rest of the herd. Whenever possible they should be placed in darkened quarters. Such a practice will not only protect their eyes from painful light but will also discourage the presence of flies that may spread the disease to other animals. No other treatment is as valuable or important as these simple steps. Sore eyes may be washed with warm boric acid solution twice daily or yellow mercuric oxide ointment may be put in them two or three times a day. Mixed sulfa powders are sometimes blown directly into the eyes with patented "puffer" tubes in the hope of destroying existing infection. It is doubtful if medical treatment of any kind affects the course of the disease once it has started.

Prevention

The only satisfactory method of prevention consists of being sure that newly purchased animals are not carriers of pinkeye germs. Unfortunately, this is just about impossible to do. As a second choice, new animals can be quarantined for at least 30 days before they are turned out with other cattle. This will help to insure against animals actually coming down with pinkeye in clean herds. Vaccination with various preparations has not proven too satisfactory as a means of preventing this disease in cattle.

BLUE BABY CALF

We have a Holstein heifer calf that is a blue baby, born in February. Three days after birth, we noticed it was hard for the calf to breathe. So we had the veterinarian out and he said it was a blue baby. He gave it a shot and left six white pills of which we gave it one a day until gone. He said there wasn't any more that he could do. The calf seems to be growing in height, but it is thin and just doesn't seem to be gaining any weight. Its heart seems to be beating twice as fast as it should. Some days it seems to be fairly good and will eat good, other days it is hard for it to breathe and is very inactive.

Lena, Ill. E. B. K.

There is nothing to be done for those "blue baby" calves except feed them well and keep them as quiet as possible to avoid overexertion. The condition is due to a faulty heart and the animal stands a good chance of living. However, it will probably never be healthy and will be something for you to bother with all its life so we doubt that you will be justified in raising it. A sickly calf can't be expected to grow into a good milk producer or even a dependable breeder. In the case of this animal, the heart disorder might even be inherited by her calves if she ever has any.

INSEMINATING COWS

Which is the most efficient way of artificial insemination of dairy cattle, by using the speculum or glass tube or the blind method as some do?

Elkhart, Ind. S. B.

If the speculum method is used and the semen is deposited in the vagina at the mouth of the cervix, the results are not as good as when the speculum is used and the semen is deposited in the cervix. Greatest efficiency is reportedly achieved by the more common procedure here in the United States. This involves going through the rectum, locating and holding the cervix, and then passing an insemination tube entirely through the cervix and depositing the semen directly into the uterus.

The only direct information we have on these comparisons comes from a technical publication put out by the British Imperial Bureau of Animal Breeding and Genetics.

Repeated washing of wounds on animals is not necessary or advisable, as water and dampness retard healing.

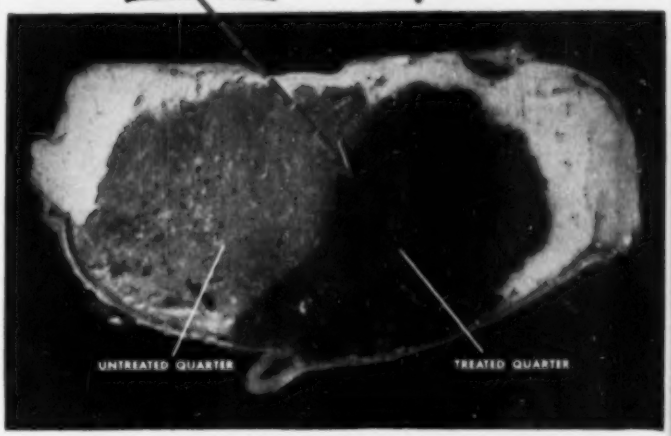
Veterinarians say that the habit of wind-sucking in calves can sometimes be corrected by filling the calf's mouth with finely ground grain as soon as it finishes drinking.

Hog producers who have never had swine erysipelas on their farms can do much to keep it out by growing their own breeding gilts and by obtaining boars only from herds known to be free of this disease.

Why is this ointment so effective in treating mastitis*?

Millions of cases have been successfully treated with it!

Look inside the quarter!



Note how Squibb Ointment disperses penicillin throughout a treated quarter! One tube of Squibb Ointment, containing a dye instead of penicillin, was instilled into one quarter of a cow's udder. The cow was killed 17 hours later—the udder removed and frozen—and the above cross-section photograph taken.

Here are your reasons for *asking for* Squibb Penicillin Ointment:

- *Thorough dispersion* throughout entire treated quarter, reaching the infection no matter where it may be in the quarter.
- Attacks mastitis* organisms over a period of from 48 to 72 hours—without interfering with regular milking hours.
- Effective in 9 out of 10 cases of mastitis*—usually with the use of only one tube.
- Stops milk check losses by getting infected cows quickly back to full production of salable milk.
- Stable, non-toxic, non-irritating.
- Clear ointment—won't discolor milk.
- Easy to use. Improved tip on "Instant-Use" tube inserts smoothly into teat. Ointment flows readily from tube into infected quarter. Treatment is a matter of seconds. No syringe required.

Squibb "Instant-Use" Penicillin is sold in drug stores only. Ask your druggist for it. It's inexpensive! Keep this *proved* ointment always on hand in the barn. Treat mastitis* at the first sign—stop its spread—save yourself many dollars. Write for folder on MASTITIS. E. R. Squibb & Sons, Veterinary & Animal Feeding Products Division, Dept. HD-7, 745 Fifth Avenue, New York, N. Y.

*due to *Streptococcus agalactiae*, the cause of the largest percentage of all mastitis cases.

SQUIBB—A NAME YOU CAN TRUST

CAN YOU GET *ALL* THE CORN YOU GROW?

MM HUSKOR

MINNEAPOLIS MOLINE — MODERN MACHINERY

LONGER PICKING ROLLS MORE HUSKING ROLLS

Owners say "YES, or at least all that can possibly be saved!"

OWNERS SAY YOU CAN PICK, HUSK AND CLEAN up to 13 acres of corn a day with the easy-operating MM 1-Row HUSKOR, and 25 acres or more with the 2-Row. Built to get *all* the crop, this smooth-running, easy-pulling MM HUSKOR operates so that the kernels stay on the ears until the time MM SHELLERS are asked to do the shelling job.

ASK, AND OWNERS WILL TELL YOU that with MM HUSKORS you save more corn, husk more acres and cut your labor costs with the outstanding picking and husking capacity of an MM HUSKOR working for you. One man and an MM MODEL R VISIONLINED TRACTOR can handle either the 1-row or 2-row HUSKOR with ease. The MM UNI-MATIC hydraulic operating device may be used. Special loose *husk* eliminating fan is a regular and an original MM feature.

LONGER 53½" MM SNAPPING ROLLS AND *MORE* HUSKING ROLLS handle ears gently to greatly reduce ordinary cracking of kernels and shelling in the field. Floating snouts adjust to five positions. The three gathering chains pull in *all* possible stalks . . . down stalks, out of line stalks, extra heavy stalks, spread out stands . . . and guide the stalks and ears up-right into the longer, specially designed MM snapping rolls. EIGHT 27-inch husking rolls on the 1-row and TWELVE 36-inch husking rolls on the two-roll *with every other roll rubber coated* give MM HUSKORS greater capacity under all husking conditions for doing a faster, cleaner job. Additional pegs may be inserted in husking rolls for extra tough husking jobs.

FASTER, EASIER, SMOOTHER OPERATION. Spring tension safety clutches give MM HUSKORS automatic protection against breakage in case of obstructions. Completely sealed, high grade roller and thrust bearings on all principal drives assure lighter running, longer lasting performance. Fully enclosed power-take-off drive gears, all steel and firmly keyed, operate in a continuous oil bath.

All controls are within easy reach of the tractor operator. HUSKOR hitches will fit wide or narrow tread tractors. Without leaving tractor seat, operator can change the trailing distance of wagon so load is evenly divided.

Quality-built MM One and Two-row HUSKORS are available without husking bed assembly for use as corn snappers or pickers only.

MM VISIONLINED R TRACTORS

4 front-end types, all with 140 fewer engine parts!

The dependable R TRACTOR will handle husking and other farm jobs with the ease, speed and efficient economy you need for good, sound farm management. Four forward speeds from 2.5 to 13.1 mph help you get jobs done faster. Full 2-plow power. UNI-MATIC hydraulic power and complete line of QUICK-ON—QUICK-OFF attachments for all four types are available.

***Quality Control* IN MM FACTORIES ASSURES DEPENDABLE PERFORMANCE IN THE FIELD!**

SEE YOUR LOCAL MM DEALER OR SEND FOR COMPLETE FACTS TODAY!

MINNEAPOLIS-MOLINE

MINNEAPOLIS 1, MINNESOTA

I am interested in BUYING the following machines during the next 12 months. Without obligation, please send me promptly complete facts on equipment checked below.

Name .....

P. O. ..... State .....

- ☐ 1-row HUSKOR
- ☐ 2-row HUSKOR
- ☐ Model D SHELLER
- ☐ Model E SHELLER
- ☐ Soy Bean HARVESTOR
- ☐ MM G TRACTOR 4-5 Plow Power
- ☐ MM U TRACTOR 3-4 Plow Power
- ☐ MM Z TRACTOR 2-3 Plow Power
- ☐ MM R TRACTOR 2 Plow Power

I farm ..... acres.